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NEEDLEWORK AND CUTTING OUT

EMILY G. JONES

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MANUAL OF NEEDLEWORK

AND

CUTTING-OUT

BY

EMILY G. JONES.

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A MANUAL

OF

PLAIN NEEDLEWORK

AND

CUTTING-OUT.

BY

EMILY G. JONES,

DIRECTRESS OF NEEDLEWORK TO THE EDUCATION DEPARTMENT.

SEVENTH EDITION.

With Original Plates and Illustrations,

AND A SECTIONAL THREE-YARDS SHEET CONTAINING PATTERNS, "ARRANGED SO AS TO SHOW THE GREATEST ECONOMY OF MATERIALS.

LONDON:
LONGMANS, GREEN, AND CO.
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PREFACE.

THIS little Manual, which is a revised and enlarged edition of 'How to Teach Plain Needlework and Cutting-Out,' has been written in the earnest hope that, by its aid, a most valuable part of a woman's education may be so simply and effectually taught, that the girls of the present may be fitted to become the thrifty, helpful, happy wives and mothers of the future.

'Nothing useless is, or low;
Each thing in its place is best;
And what seems but idle show
Strengthens and supports the rest.

January 1884. EMILY G. JONES.

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Plain Needlework and Cutting-Out.

CHAPTER I.

THE COMMENCEMENT OF WORK—IMPORTANCE OF DRILL.

IN olden days the great occupation of woman's life was needlework. Many are the pictures we have of ladies and their maidens at work on the tapestry hangings and emblazoning colours for their lords, and many are the specimens still existing of exquisite point lace, marvellous kerchiefs, aprons and samplers, etc., which fill us with wonder at the patience and eyesight of the workers of the past. But in these days of moral and intellectual improvement women devote themselves to music, languages, art, politics, physiology, geology, conchology, metaphysics, and social reforms. Our exquisite souls soar to realms of poetry and mysticism, and, as a natural consequence, many homely handicrafts, amongst others that of plain needlework, have fallen into disrepute, or at least into disuse. What could be more contemptible than mere mechanical drudgery? What more revolting to the æsthetic mind than confronting poverty by darning the vulgar stocking? Who would not shudder to be styled thrifty? But, humiliating though it may be, we are obliged to acknowledge the need of clothing. The author of 'Sartor Resartus' puts it more forcibly, and declares that without dress we are nothing; but per-

haps he was wrong. In order to have our clothing according to the rules of the great power Fashion, we are reduced to the necessity of making it. To our aid came the sewing machine; this was hailed with delight and satisfaction. A garment could be run up in a day; but, alas! even sewing machines have their imperfections, and in this chequered existence we are finding the melancholy truth that hand-work is still a desideratum.

It may be asked, Why are we to have papers, lectures, and new methods for a subject which our great-grandmothers knew all about? Of course we must know all the latest theories respecting light, chemistry, or telephones; but what can be said on needlework that is new? This is the point. We do not profess to teach a new thing, but a new and more interesting mode of teaching an old subject. In these days of compulsory education, where classes consist of from thirty to one hundred girls, there has arisen the absolute necessity of some definite system of collective teaching. If simultaneous instruction in writing, arithmetic, etc., with the aid of blackboards, is admitted to be practicable, why may it not also be practicable for needlework?

The present series of papers will be framed upon the system taught by the London Institute for the Advancement of Plain Needlework, which, when understood by the teacher, will be found to save her an infinity of trouble, and relieve the children of a great deal of unpleasant drudgery. By experienced teachers the system will soon be grasped and grafted into their present *régime*, recommending itself, when brought to their notice, by its simplicity, completeness, and adaptability, the carefully thought-out details making it most easy to those who are, perhaps, inclined to feel out of heart at the thought of 'another new thing.' Many young teachers will possibly say at first, 'What a fuss

about nothing! We've done very well up to now. To them I would reply, 'I am afraid you have not done very well up to now. The generality of the girls who have passed through your hands cannot sew at all, and certainly cannot put a garment together and make it themselves.' The voice of public opinion is rising up and saying we are paying so much for education, and can't get done what we want. Ask any lady wanting a housemaid, or nurse, who must assist with the sewing, if she finds it easy to get one? The large firms are calling out for needlewomen. I believe, too, that a more practical knowledge of needlework would be of the greatest value socially, from the habits of cleanliness, neatness, thrift, comfort, and industry it would induce.

If attention be paid to every detail, a careful study of the following pages will, I hope, enable every teacher to carry her pupils successfully through a complete course.

It must be remembered that they are written for teachers, and that, in consequence, enough will be condensed into each section to afford lessons for a term, or terms, according to the age and capabilities of the pupils. For example, if a child in an elementary school begins its needlework below Standard I., it is not supposed to have finished its course until it has gone through all the six standards, a period of more than six years. But if a girl of sixteen wishes to begin to learn hemming, one may reasonably expect that a much shorter time would be sufficient to teach her, at least how to do certain stitches, though, of course, neatness and quickness in manipulation can only be attained by practice.

Needlework has been called 'the girl's disgust, the woman's consolation.' My great object will be to show who, by intelligent teaching, the needlework hour may

be made interesting and bright, banishing for ever the disgust and leaving only the consolation. It is desirable that as soon as a child has learned to hem fairly, it should be allowed to complete a small garment itself.

The annexed copy of Schedule III. will be familiar enough to teachers of elementary schools, and will be of great use not only to teachers in high schools, but also to governesses generally, as it will form common ground for all to work upon; because, if a governess has a pupil of fourteen or fifteen years of age, who is only a beginner, she must be called Standard I., and should do the work of Standard I. until she is perfect therein, before proceeding to the stitches in Standard II., and so on; though, of course, as I said before, her progress ought to be more rapid.

SCHEDULE III.

NEEDLEWORK.

N.B.—The material used, whether in the exercises performed before the inspector or in the garments shown to him, should not be so fine as to strain the eyesight of the children.

GIRLS' AND INFANTS' DEPARTMENTS.

BELOW STANDARD I.

Needle drill.—Position drill.

Strips (18 inches by 2 inches) in simple hemming with coloured cotton, in the following order, viz.:—1. Black. 2. Red. 3. Blue.

Knitting-pin drill.

A strip knitted (15 inches by 3 inches) in cotton or wool.

Standard I.

1. Hemming, seaming, felling. Any garment or other useful article which can be completed by the above stitches, *e.g.*, a child's pinafore, pillow case, or pocket handkerchief. In small mixed country schools, strips (18 in. by 2 in.) of hemming, etc., may be shown at the discretion of the managers, in place of a garment.
2. Knitting. 2 needles, plain, *e.g.*, a strip on which to teach darning in upper Standards, or a comforter.

Standard II.

1. The work of the previous Standard with greater skill. Any garment or other useful article, as above.
2. Knitting. 2 needles, plain and purled, *e.g.*, muffatees.

Standard III.

1. The work of the previous Standards, stitching and sewing on strings. Garment, a pinafore, shift, or apron.
Herring-bone stitch. The stitch only on canvas, or flannel.
Darning, simple, on canvas.
2. Knitting. 4 needles, plain and purled, *e.g.*, muffatees.

Standard IV.

1. The work of the previous Standards, gathering, setting-in, button-hole, sewing on button. Garment, a plain night shirt, night gown, or petticoat.
2. Marking, simple, on canvas.
3. Darning, plain (as for thin places), in stocking web material.
4. Knitting. 4 needles, a sock.
5. Herring-bone, a patch (at least 3 inches square) on coarse flannel.

Standard V.

1. The work of the previous Standards, and the running of a tuck. Garment, as in Standard IV.
2. Knitting. 4 needles, a sock or stocking, ribbed or plain.
3. Plain darning of a hole in stocking-web material.
4. Patching in calico and flannel.
5. Cutting out any garment such as is required in Standard III.

STANDARDS VI. AND VII.

1. The work of previous Standards, whip-stitch, and setting-on frill. Garment, a baby's night gown, or child's frock.
2. Darning, plain, on coarse linen.
3. Patching in print.
4. Knitting. 4 needles, a long stocking with heel thickened.
5. Cutting out any under-garment for making up in Standard IV.

NOTES.

1. Garments must be shown in each Standard, but not necessarily those specified in this Schedule, which are mentioned merely as examples. They must be presented in the same condition as when completed by the scholars.
2. At least half as many garments must be shown as there are girls examined in Standards I., II., and III. Each garment must be entirely made by its own Standard. In Standard IV. and upwards each girl must present a garment made by herself.
3. Girls should be encouraged to fix their own work in the garments shown. Those above Standard I. will be required to "fix" and "cast on" in the exercises performed by the Inspector

---

PUPIL TEACHERS (GIRLS).

First Year.

1. A garment in calico or print, showing all the stitches required in Standard IV.
2. A hole correctly mended in stocking material.
3. A patch, not less than 2 inches square, on calico.
4. A sock.

Second Year.

1. A Garment in long cloth showing all the stitches required in Standard V.
2. Grafting and Swiss darning on stocking material.
3. A patch, not less than 2½ inches square, in flannel.
4. A boy's knickerbocker stocking.

Third Year.

1. A garment in long cloth or print, showing all the stitches required in Standard VI.

2. A hole filled in with stocking web stitch, on stocking material, not less than 1½ inches square.
3. A patch on print.
4. A pair of knitted baby's boots.
5. Pattern of a shirt or night dress (full size) drawn to scale (¼ size) on sectional paper; quantity and quality of materials to be stated.

Fourth Year.

1. To show a garment, suited to Standard IV., cut out and neatly "fixed" or "tacked" together.
2. A three-cornered (or hedge-tear) darn, the tear not less than 1 inch square, and a cross cut darn, on coarse linen.
3. A roll, or piece of sectional paper (¼ inch scale) representing a piece of calico or Holland, 32 inches wide by 3 yards long, on which patterns of garments, suitable for children attending public elementary schools, are drawn so arranged as to show the greatest economy of materials.

NOTES.

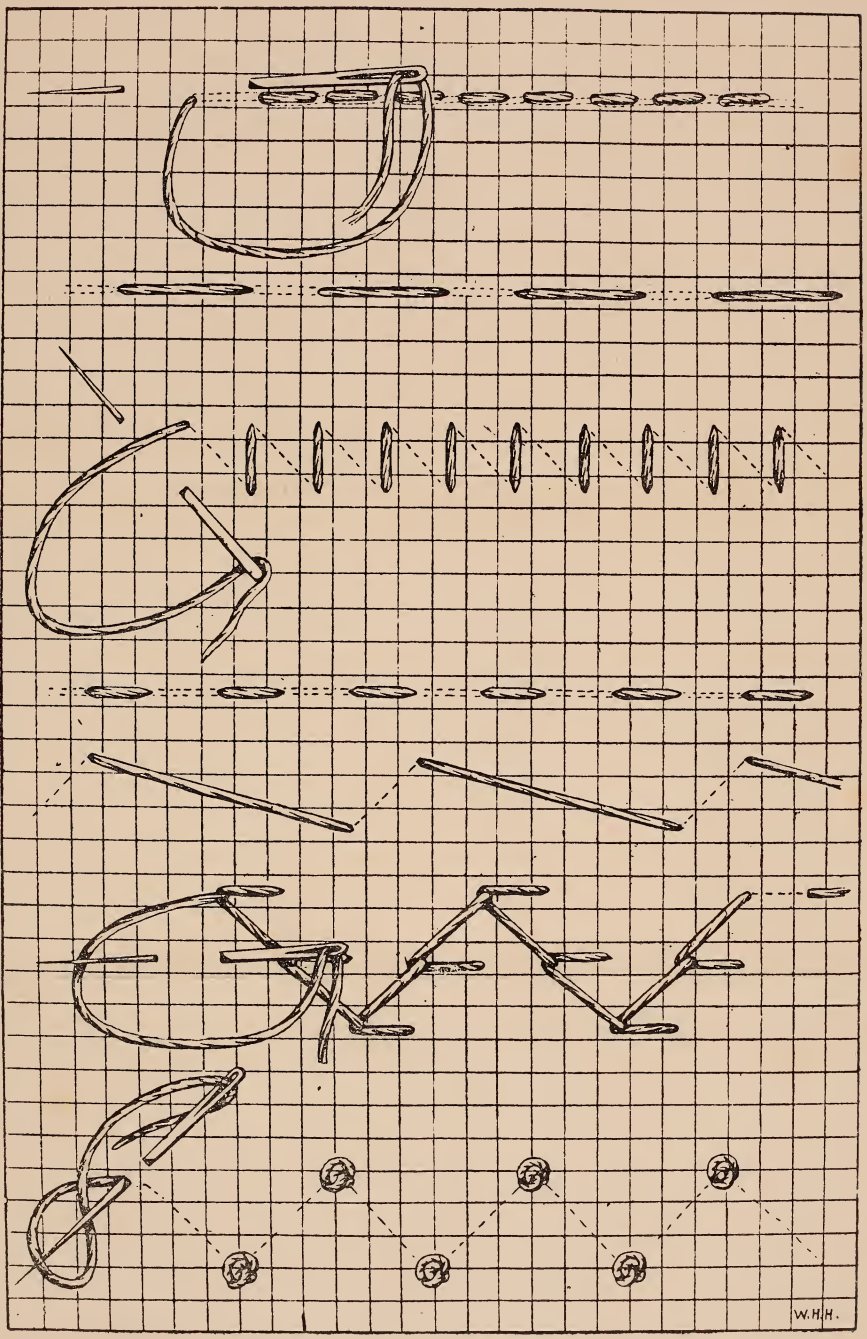
1. In all cases the specimens, garments, and drawings shown to the Inspector must be done without assistance, and presented as they left the worker's hands. All garments must have been cut out by the makers.
2. No embroidery is to be used. The garments should be of plain simple patterns, showing intelligence and good workmanship, but without elaborate detail.

We will now suppose a teacher surveying her pupils on the Monday after her Government inspection; the whole school empty-handed, the garments on which they had been so busy, completed and sold—what is to be done? Her first business will be to see what sort of infants have been sent up from the Infant School, and to direct the teacher of the new Standard I. to give out sheets of old exercise or copy books, and let the chil dren show what they can do in fixing hems on paper, perfectly straight, folding the corners in pairs, in fixing

counter-hems, and sew-and-fell seams, tacking them with cotton. Also to see what can be done in knitting. If they can knit but not "cast-on," give a lesson in casting-on; if they *can* cast-on, let them do so, and begin a strip of purl and plain. Standard II. might also begin with knitting. Meanwhile some of the girls in Standards III. and IV. might be set to wind skeins of knitting cotton and yarn for future use; others should be cutting and fixing strips for Standard I. to hem; or if, as is the case when infants are properly taught, Standard I. is beyond hemming strips for dusters (see 'Plain Needlework in Six Standards,' published by Griffith and Farran), let the strips be twelve inches long selvedge way, and two wide, to be *seamed* together for a petticoat, which will be described in the chapter on seaming. The girls in the upper standards should be cutting canvas into squares which will be made into samplers for learning new stitches. The head-mistress will then cut out pinafores, or little shirts, to be made by Standard I., which, as soon as cut, are passed to Standard V. or VI. to have the hems fixed and tacked; because, though Standard I. may be able to fix its own straight hems, yet it cannot be expected to fix the more difficult curved sides or rounded corners. Thus it will be seen, that by a little method, the whole school may be set to work at once, without the head-mistress and assistants having to stay overtime to cut out and fix for perhaps 360 girls.

This state of things, however, should not occur again, because, by the end of the year, we ought to have taught Standards V. and VI. to cut out, so that by the time they pass out of the school, they will leave behind them a number of garments cut out, and ready for the junior standards to set to work upon. There is frequently a great waste of time during the first two or three

Plate I.



Stitching, p. 26.

Gathering, p. 29.

Setting-in, p. 31.

Running, p. 24.

Whipping, p. 38.

Feather-stitch, p. 39.

Knotting, p. 39.

months after inspection, especially in needlework, which naturally causes "cram" later on. There being no system, nothing is ready to go on with. The cutting out and preparation of the various practice and examination pieces is in itself a most important lesson, and might well employ the first day or two at the beginning of each school year.

Too much attention cannot be given to the teaching of details in the earlier stages, as this forms the foundation of all good work. The folds of the hems must be turned perfectly straight, therefore let the teaching material be *coarse*. We begin to teach writing in copy books ruled for large hand. We give lines, to help the untrained eye to keep straight, and to learn what "straight" means as compared with "crooked." We give chequered paper in our arithmetic books for the same purpose. Therefore, on coarse material, of which the threads can easily be followed, let the eye be *trained*, and not *strained*, as it too often is if fine material be used, and so let neatness be learnt from the first, that there may be nothing to unlearn. Six threads for the first turn and twelve for the second is a good useful rule to give, as the width of all the hemming to be done by Standards I. and II. Let the pupils learn from the first to depend upon themselves, and not to keep demanding attention, and inquiring, "Is this right, please?"

For a moment we must turn our attention to the infants. Here the drill lessons are most valuable, not only as an assistance in teaching needlework, but in instilling that instant obedience which is so necessary when collective teaching is concerned. To compel the children to look to the teacher for the word of command for every act enforces such attention that perfect discipline—which in an infant school especially is more than half the battle—is ensured. If young men of

eighteen years of age or thereabouts are made to stand with their thumbs touching the seams of their trousers, and obliged to 'mark time,' and if later on every detail in the handling of a rifle has its regular gradation, the placing of the hands, the position of the fingers, etc., etc., nothing being deemed too insignificant to ensure success in the mighty organization of our army, we need not cavil at details which will ensure success in the mighty organization of our national education. "Order is Heaven's first law," so Earth need not try to get on without it. I remember, a short time since, reading in the paper an account of the saving of the lives of some hundreds of children owing entirely to the presence of mind of the mistress and the discipline of the scholars. The care-taker discovered that the school was on fire, and told the mistress. She proved equal to the emergency, called 'attention,' told the children she wished them to march to a certain part of the road, gave them the orders for dismissal, and thus cleared the school of little ones before a panic seized them, which would have been disastrous in the extreme.

It is not advisable to give a drill and call it 'the drill,' because each teacher knows what she wants to arrive at, and must adapt her orders to the comprehension of her class. When a head-mistress has made up a drill for stitches, etc., which she finds practical, of course all the junior teachers will work on those lines, because it is most confusing to a child to have to learn a new drill when it is moved up from class to class. I would urge the importance of teaching only one step at a time. Every day may see a new step, but let each be perfected before the next is begun. Again, a teacher should not give an order that she does not see carried out; therefore let the orders be few and to the point. Also accustom all the children to take them from the teacher as she stands in front of the class.

I have often noticed that there will be a few little ones who don't try at all to follow the lesson, but just wait—experience having taught them that presently the teacher will come round and set them going. In cases like these, I would make the little idlers serve as a solemn example of the consequences of inattention, by directing them to stand up and take their orders by themselves, the teacher standing in her usual place.

A sketch of lessons to infants will be found at the end of the book.

Let infants first learn to thread needles, using the 'Baby Threaders'; *secondly*, to place the work correctly on the first finger of the left hand, and hold it in place with the thumb and second finger; *thirdly*, to make a stitch with the needle but no thread. Next comes the making of the stitch with thread, and in order that this may be the right shape, teach the children to point the needle to the middle of the left thumb-nail. The use of coloured cotton is a great assistance to teacher and pupil, being easy to see. It also acts as a stimulus, if it is used in grades—black to begin, red as an advance, blue a further promotion, and white as the highest attainable.

The faults to be seen in hemming are, first, the upright stitches of the beginner, caused by the needle being put in like a skewer, and pointing to the top edge of the hem instead of towards the left thumb, and also because the child puts the needle in just under where the cotton has been drawn out, instead of making a little step forward. 'Split hemming' is another fault, *i.e.*, where the needle is not made to shine through clearly on the right side, but is allowed actually to split the threads of the material, thus showing scarcely any stitches on the right side, and, of course, forming most insecure, unpractical work, which will soon burst out. 'Straight hemming,' showing a horizontal stitch on the

right side, like running, is also a fault, and to be avoided for the same reason. What is called single-thread hemming, as it is practised now, is much to be condemned. It has probably arisen from a misunderstanding of *seamed hems* of house-linen. The correct shape of the stitch in hemming is a succession of the letter V, half the V being on one side and the other half on the other side of the material. Between the points of the V there ought to be four threads (see Plate II., page 32).

Having on one occasion to object to single-thread hemming in a school, the mistress said that there had been such a difference of opinion between her and her pupils as to the size of a 'little stitch,' that she had made the class work single thread, in order to show them what neat hemming looked like. She did not know, till I told her, that there was a rule for correct hemming.

I wish here to remark that, throughout the following chapters, I shall constantly give rules for stitches for the use of teachers, that they may have something definite to teach. The pupils, in all cases, are to be taught on material so coarse that they can easily see the threads, wherever it may be necessary (in the first learning of the stitch) to count them.

Counter-hem has been much misunderstood. It was suggested simply as a means by which a garment might be completed by hemming. For example, in the 'Princess' pinafore, the only join is the little bit on the shoulder. If the class has not arrived at seaming, how can the shoulder be joined? The only difficulty is the fixing. If the teacher will make the children learn to fix a counter-hem in the following manner, she will have prepared the way to the fixing of the sew-and-fell. Let her give out two pieces of paper or material—call one A, and the other B (a pin

put in one will distinguish A from B). Let each child fold the edge of A down once, as for first turn of hem, lay that piece down, take up B, and fold the edge also once towards her, and then fold it once back from her, so that a crease is made, which will be the guide for the place of the folded edge of A. Put raw edge to raw edge, and tack them. Hem down the folded edge of B on to the material A, and the folded edge of A on to the material B.

CHAPTER II.

SEAMING, SEW-AND-FELL, STITCHING, AND HERRING-BONING.

SEAMING is the next stitch which demands attention; it is called by different names in different localities, such as 'sewing,' 'over-sewing,' 'top-sewing.' I prefer to call it 'seaming,' as sewing is the generic name for all needlework.

The great difficulty with this stitch is the *pucker*. This, however, may be entirely avoided if the pupils are carefully taught from the beginning how to hold their hands, and the proper position of the needle.

The two edges of the material ought to be doubled. It is a mistake to teach a child to seam on two selvedges at first, as they are stiff, and not very even. The child should hold the material in the left hand, so that the folded edges lie along the first finger, and round—not over—the end of it, the thumb and second finger holding the material firmly in place. There should be as much of the work in the fork of the thumb and finger as the child can easily hold, because if, as is too frequently the case, a bit of about half an inch is held between the thumb and finger, there is an incessant drag, which causes the work to be always on

the slant, and prevents the stitches from being even and regular.

The right elbow ought to be raised from the side, and the needle should point straight to the chest of the worker. The shape of the seam stitch is like the letter N (Plate II., page 32). The slanting part is that which is seen at the top of the fold. From point to point of the N there ought to be two threads. If these details are attended to, there will be no pucker; but if a child is allowed to hold her right arm close to her side, she will naturally point the needle in an oblique direction, which will cause it to take in more threads of the fold nearest to the worker than of the outside fold, and though it may be only one thread per stitch, that means one inch in three!

The teacher should stand in front of her class, and, holding a practice piece in her hand, should make the children copy her in each act, first as regards the position of the work, and next that of the needle. One or two of the children who are right first might be sent round to show the others.

I cannot dwell too strongly on the success of simultaneous teaching.

Some time ago, an infant schoolmistress of experience said the idea was all very well in theory, but she did not think it practical. After some conversation she promised that she would work one class entirely on this system.

About three months later, on visiting her school, she met me with these words, 'I am a perfect convert.'

It appeared that she had been obliged to re-classify her whole school (attendance 250 to 300), and that she determined to adopt the system in all the classes. She expressed herself astonished at the progress the children had made in so short a time, and said that all the lessons were influenced by the discipline of the drill.

I never wish to see a pleasanter sight in a school than those 260 infants all looking eagerly at their teacher for the word of command for each act.

Every infant schoolmistress who has tried the teaching of needlework to boys, speaks most warmly in favour of it. The lesson makes a pleasant variety, and affords a relief from the three R's. One boy's mother wrote to ask his teacher if he might be excused needlework, he 'hated it so.' The teacher replied she could make no exceptions; he would like it when he had had a few lessons. Before the end of the year, the little lad had completed an apron, which was bought with delight and triumph by the mother. Other little boys have knitted comforters for themselves at home. What a Utopian existence might worried mothers look forward to, if their offspring would knit comforters on cold wet afternoons, instead of sowing seeds of disease and ruining their clothes by playing in the gutter! But, apart from this, the education given to the fingers by the needlework-lesson must be of great practical use in after life, especially to those who are engaged in any of the more delicate handicrafts, such as weaving, watchmaking, engraving, etc. Some people have argued that it makes boys feminine to teach them to sew. I believe our soldiers and sailors do a good deal in the way of making and mending their own clothes, but I never yet heard that they were considered womanish in consequence.

However, to return to seaming. One fault besides the pucker must be noticed, viz., that the stitch is frequently taken too deep, making a thick, ugly ridge. The needle ought only to skim the top of the folds, about one thread deep being sufficient. The seam, when finished, ought to be laid on the desk or table and flattened down.

The beginning of a new needleful ought to be an

important lesson. The ends of the old and the new needleful should be seamed over on the top of the work, not tucked in between the folds. In putting in the needle for the first stitch, only the fold nearest to the worker ought to be taken ; the end of the cotton is then in place to be sewn over. A neat finish to a seam is made by turning the work round and seaming back four or six stitches.

Seaming having been learnt, the next thing to be accomplished is the 'sew-and-fell.' This will present no difficulty if it be carefully fixed. I should expect Standards III. and IV. to fix the 'sew-and-fell' in the garments to be made by Standard II. Standard II. must, however, be taught to fix, firstly on paper, then on material. Let the teacher give out two pieces to each child, and as, in future practical work, attention must be paid to the right side and the wrong, the children may as well be taught this from the first. Let them put a pin, or pencil-mark, on each piece to indicate the right side. Then, taking up one piece, and holding the *right* side towards herself, let each child turn down the raw edge about six threads on to the right side then fold it back on to the wrong side, and put it on the desk. Now let her take up the other piece, and holding the *wrong* side towards herself, turn down the raw edge about six threads. The two pieces should then be put together, wrong side to wrong side, and tacked carefully close to the edge, which ought to show two doubled folds, with a raw edge between them (Fig. 1). When this is secured, let the tacking threads be taken out, the seam flattened down, and the material turned over to the under side of the join, where a folded edge will be found ready for hemming. In England seaming is always worked on the right side of the material. The fell must be

FIG. I.

kept narrow. After the children have succeeded in fixing and working the sew-and-fell on straight pieces, let them fix and work pieces cut in a semi-circle, or on the cross-way of the calico, as the fell is generally used in joining two curved pieces; for example, the under part of the arm-hole of a chemise. Run-and-fell is not allowable in plain needlework. It must be called 'scamp-work.' If properly done, it takes as long as the seaming, and even then is not very secure, especially where there is any strain on the join.

There ought to be no waste of teaching material in a girls' school. As soon as a child can hem it ought to become a producer. The strips used in hemming must be saved until the seaming lessons commence, when they should be seamed together for

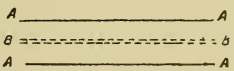


FIG. 2.

school dusters. I must object to practice-pieces being cut into small bits, of the size used on inspection day. It is a waste of material. If the school makes more dusters than it requires, they may be sold for a half-penny each, or the strips could be made into little petticoats, to be sold at the price of the calico.

I have seen excellent little garments made thus. The strips are cut about two inches wide and twelve or fifteen long. The raw edges of each are folded down, and seamed together. Each strip is now double. These are then folded so that the seam comes in the middle of the strip.

In fig. 2, A represents the edge of the strip, B the seam. These strips are seamed together at the edges A, so that the skirt of the petticoat presents on the under side a row of seams every half-inch, and half

that number on the right side. The little body is made in the same way, only, of course, the strips are not so long. A binding of tape will complete a garment which finds a ready sale, besides having also provided weeks of sewing.

I need hardly say it must not be the object of the teacher to make endless strip-dusters and petticoats. These are merely suggestions of good practical uses, to which the teaching material, which would otherwise be a dead loss, might be turned.

Among the new stitches to be learnt in Standard III. are 'stitching,' sometimes called 'back-stitching' (Plate I., page 17), 'marking,' and 'herring-boning.' Hitherto we have taught Standards I. and II. by drill, oral, and demonstration lessons. We now come to the use of the frame. Let the children be supplied with a practising sampler made of canvas, size four inches square, and backed with any piece of holland or calico out of the snip basket (the stitches should be taken through the calico back of the sampler, otherwise the canvas is apt to pull out of shape). These samplers thus provide material of such coarse threads that they are easily counted. The frame represents a magnified sampler, and with the needle especially made for the purpose, the mistress teaches her whole class the new lesson. The standard rule for this stitch is:—From the place where the cotton comes out, count two threads to the right, put the needle in, and take up four threads on the needle, which will bring it out two threads in advance of the cotton (Plate I., page 17). The stitch is sometimes seen half this size, but it then ceases to be ornamental, and is a useless strain on the eyesight. Stitching is always worked on the right side, and on double material; a thread may be drawn to give a straight line where practicable, though, of course, on the rounded corners of collars and wristbands, this

cannot be done. Having learnt the stitch on the sampler, the children should then work a few inches on coarse material, and afterwards be set to stitch the band of the unbleached calico garment they are to make.

Herring-boning is only used for flannel. The children should be taught as before, first on the sampler, then on flannel. Strips of list herring-boned together make warm linings for children's under-garments, at no expense. This stitch is worked from left to right, and ought to be four threads deep—*i.e.*, from the upper row of stitches to the lower row (fig. 3 and Plate II., page 33). If the children are taught by thread on the sampler, they will see that the little cross on the top row comes between the crosses on the bottom row, and

Fig. 3.

vice versâ. So that, bearing this in mind, they will always produce straight herring-boning on flannel, without the necessity of counting threads. The lower row of stitches ought to be just off the raw edge of the fold.

Sometimes we find herring-boning taught on calico. This is a great mistake, and ought never to be allowed. Whatever the children are taught at first, is the idea that remains for ever on their minds. Even if the teacher says, 'I only give you calico to learn on,' this is forgotten, and the only thing remembered is, 'We used to herring-bone calico at school.' I have touched on this point because it is a most important one. Let every stitch be taught with the proper materials. I lately saw button-holing taught with darning cotton,

also with silk on calico garments. I have seen a calico patch herring-boned because the teacher did not happen to have a bit of flannel; also calico patched with flannel. I have seen holland and calico joined by sew-and-fell. All these liberties allowed by the teacher produce the worst possible effect on the children. Not only do they never know what is correct, but they grow up with the feeling that 'anything will do,' and are slovenly and ignorant in consequence. The children ought to be taught each detail perfectly; then, when they become experienced needlewomen, they will know when and where a little license might be permitted.

The sewing-on of strings ought to be carefully taught. It is a good practical rule to place the tape as far from the edge of the band as the width of the tape, though, of course, this must be subject to variation, as, for example, when it may be necessary to put the string at a distance from the edge of the band, to allow it to fold over. Strings may be hemmed round three sides on to the garment, then turned back, and seamed to the edge; or they may be stitched on, the stitching forming a square; but, whatever plan may be adopted, the points to be attended to are, that the sewing be neat, and the string secure, and able to stand a good pull. The fastening-off of the cotton must be carefully done. The ends of the strings ought to be hemmed, or else they ravel out, and are most ragged and untidy.

Dirty cotton is often a great source of annoyance to teachers. This can in great measure be avoided, if the children are taught to put the fourth, or third and fourth, fingers under the cotton as they draw it out. By this means the hand is always kept open; consequently it cannot get so hot as when it is kept shut, and the cotton held in the fist. When at work on the garments, a dry towel is a good thing to have on the desk for the children

to rub their hands upon when they feel unpleasantly warm. A dry towel is better than a wet one. A saucer containing a little dry corn-flour, into which the girls can dip their fingers, is also a great help in keeping the work clean.

I recently noticed a letter by a schoolmistress, remarking that mothers, even of her most successful little needlewomen, complained that they could not get them to do any needlework at home, as they were 'sickened' with it at school, and that therefore the writer thought Schedule III. was defeating itself. I should, I think, reply to those complaining mothers, 'All work and no play makes Jack a dull boy.' When their children come home from school, do they expect them to sit down and write copies, or do long sums, or learn off dates, simply for the love of it? Of course not. Neither, then, ought they to expect them to be willing to set themselves to their sewing. Healthy children need active exercise, and if they work well and steadily at school, they ought to have a season of play as a natural balance.

CHAPTER III.

GATHERING, SETTING-IN, BUTTON-HOLE MAKING, AND MARKING.

WE have now arrived at the stitches required in Standard IV.

Gathering, stroking, and setting-in (or 'stocking,' as it is sometimes called) are three separate acts, intimately connected with, and depending upon each other, for the success of the whole.

Gathering has been defined as a 'concentration of fulness.' The class should be taught the use of, and the necessity for, the stitch. In certain garments, or portions of garments, width of material is required, in

order to give play to the limbs; but to keep the garment in its place, and for comfort and neatness, it is necessary that this width should be drawn together by gathering, and be set into a band.

It is advisable first to prepare the band. Fold down the edges, seam the ends, halve and quarter the length which is to contain the gathers, marking these places with a stitch of coloured cotton. Then mark the half and quarters of the part to be gathered in the same way, explaining to the class that this is done, in order that the garment may not be more full in one place than another.

It is a good plan to make the children turn down the edge of the material to be gathered a certain depth, say eighteen threads, or the length of the finger-nail, to give a crease on which to run the gathering thread. Nothing could be more absurd than to allow the pupils to draw a thread for the gathering line, thereby weakening the very part that is to bear the weight of the garment; besides it is impossible, when the garment is hollowed out, or gored, etc., etc. The gathering cotton should be stronger than that used for the other parts of the garment. Each needleful should not be too long, and should only be taken to the quarter of the part to be gathered, or even to the eighth, if the garment is very full, as otherwise it will not bear the strain of pulling up, and consequently the work will have to be done over again. Some people suggest that the gathering thread should be double; I do not advise this in the first teaching, as double cotton is very apt to get into knots, but it is useful in working fine material (for instance, in a baby's robe), because, if coarse cotton is used, a large needle will be required, which bursts holes in the muslin, whereas fine cotton doubled will be strong, and yet will allow a fine needle to be used.

It is important that needles and cotton should be in proportion to each other, and to the material or stitch that is to be worked. (I have seen a stiff bit of chintz given to a child, with a carpet-needle and cotton No. 80.)

The standard rule for gathering, is to take up two threads, and leave four (Plate I., page 17); it is worked on the right side; this being done, the thread is gradually drawn up not quite tight, and twisted round a pin stuck in the material, at the end of the gathers. Then a steel pin, or strong needle, is held in the right hand, and the gathers are placed in order, each gather being pushed between the left thumb and finger, and pinched down. This requires careful manipulation.

The children must not be allowed to make any scratching sound in stroking, as by this means they are making unsightly pin marks, and, worst of all, are absolutely tearing the material. It will be necessary to arrange the upper part of the gathers by the same process. The cotton is then taken off the pin, the gathers spread out into the length they are to occupy in the band, and the cotton again twisted round the pin. The band must be most carefully fixed, with its half and quarters corresponding to their respective marks on the gathers. The right side should be first fixed and worked. The setting-in stitch differs in shape from hemming (Plate I., page 17), and ought to be upright, or perpendicular, on the right side.

When drawn upon the black-board, it appears like seaming, the shape of the letter N, but in setting-in, the up and down parts of the N are seen, and the slanting part is underneath, whereas in seaming the slanting part is uppermost. The needle should take up a gather with each stitch, and the band should just cover the gathering thread. When the right side is finished, the wrong must be fixed and treated in the same way, care being taken that the stitches do not show

through on the right side. If the details of marking halves and quarters, careful fixing, and the *shape* of the stitch are attended to, there will be no twisted bands.

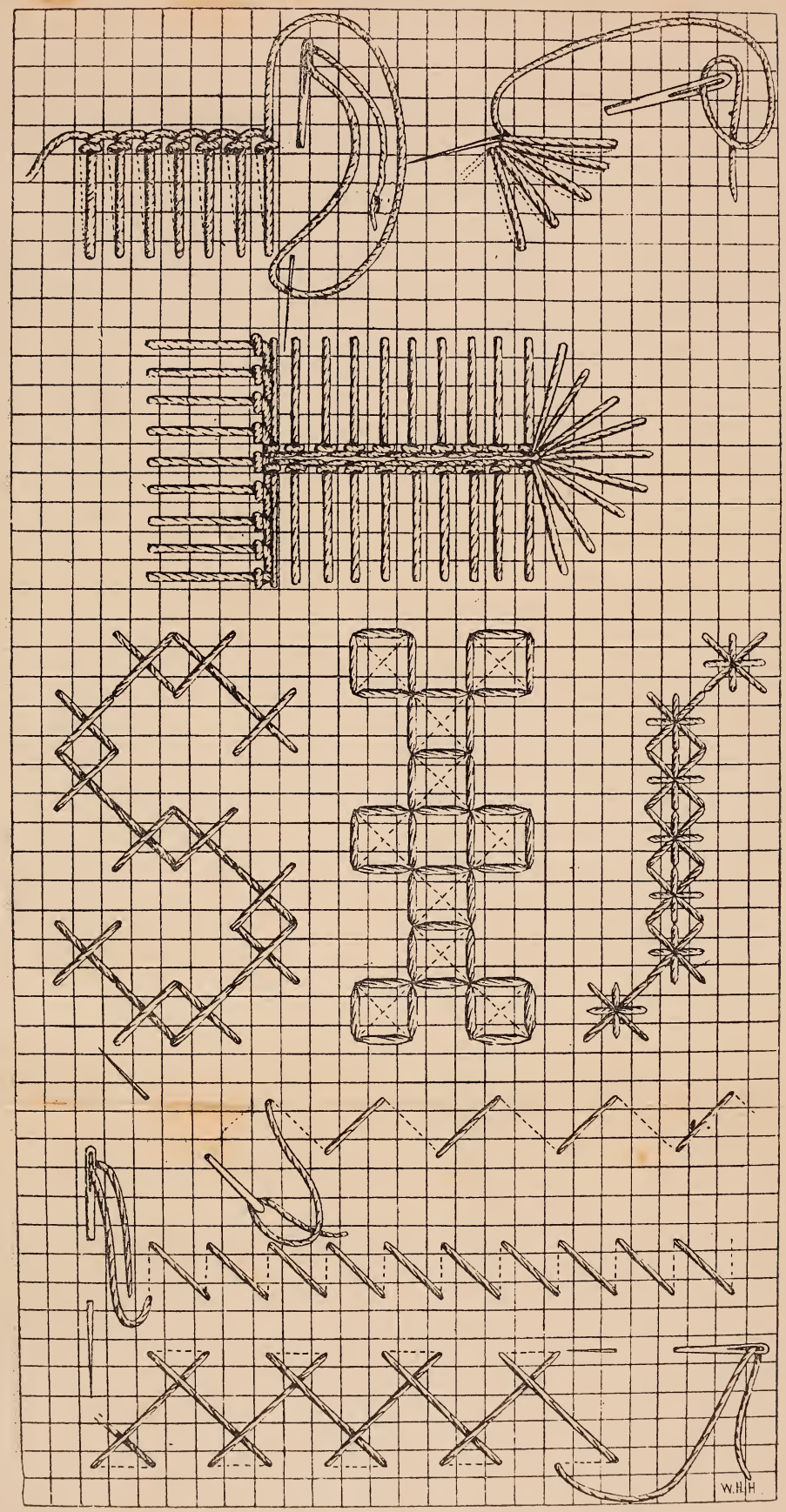
A Waterloo veteran said to me the other day, 'I don't know much about sewing, except putting on buttons, and I don't know whether you would consider mine the correct way, but they used to stick on, and that is a good point in a button. I just got a bodkin and pushed it through the button a few times, and then wrapped the thread round and round between the button and the stuff; but no doubt you have a better way.'

I had to confess, however, that I had no improvement to suggest, and, except that a needle is a more suitable implement than what we now call a bodkin, this old officer's plan is the one that ought to be taught to every child.

When sewing on a linen button, it looks neat to stitch a little ring round the middle; some teachers make a little cross, as when sewing a pierced button. The first plan is, I think, the best, especially with large buttons. (The barrel of a key will give an impression of a circle to guide the stitching.) A small button is best sewed on with the star. But whatever pattern may be adopted for sewing on the button, it is imperative that the cotton should be wrapped round between the button and the material; this is called stemming. The use of it is to protect the stitches that pierce the button, and make room for the button-hole to lie under the button. Some people sew on a button so tightly that it makes a dent in the band, the consequence of which is that it comes off, bringing a piece of the band with it.

We now come to the most difficult part of a teacher's work—viz., the button-hole. The children should be first taught the stitch only on the canvas sampler.

Plate II.



Details of Button Hole, pp. 33 & 34.

Complete Button Hole, pp. 33 & 34.

Marking, p. 35.

Hemming, p. 19.

Seaming, pp. 21 & 23.

Herring-bone Stitch, pp. 27 & 112.

They are told to work from left to right; the teacher makes one stitch on the frame, explaining what she is doing, the children follow each act. The needle is brought to the right side, and at a given point on the sampler, say six or eight threads from the edge (Plate II.). Then count upwards four threads, put the needle in and bring it out four threads down, and one to the right; let the needle rest for a moment before drawing it out, while the teacher shows the children how to take the cotton, where it is double, coming from the needle's eye, and put it from left to right under the point of the needle, and then draw the needle out away from the worker. This makes the requisite twist or knot which strengthens the edge of the button-hole. When the children have accomplished the stitch, let them work it all round the edge of the sampler, to get used to making the knots even.

Then teach the ends of the button-hole. There is an old riddle, the answer to which is 'wig,' which runs, 'I'm perfect with a head, perfect without a head, perfect with a tail, perfect without a tail, perfect with either, perfect with neither, perfect with both.' Something of the same kind may be said of the button-hole; it may be perfect with two square ends, perfect with two round ends, and perfect with one round and one square end. If made with one round and one square end, the round end should be placed nearest to the button. I will describe what is known as the 'eyelet-hole end.' This is made by nine stitches without knots (hence the name *eyelet-hole*). On reference to Plate II. it will be seen that this rounded end should be taught as a separate lesson, and may be described as having three stitches on the slant, three on the straight, and three on the slant again. Then turn the work round, and go on with the knotted stitches as before. The square end also contains nine stitches; these, however, are worked

as the rest of the button-hole—viz., four threads deep, and with the knots. We sometimesfind the square end worked as a loop for a hook; this is incorrect, untidy, and fails to answer its purpose, which is to prevent the material from splitting. Some teachers advise that the button-hole should have a thread run round it before it is cut to strengthen it. I do not, however, find this a satisfactory plan, as it is likely to burst out those very threads it is so necessary to keep even, but it may be a serviceable treatment when making a button-hole in thick, coarse material, such as serge, or even flannel. This would not, however, form any part of the work done by Standard IV., and might be left as a suggestion to be worked out, when required, on the garments in hand in higher standards. When the several parts of the button-hole have been learnt, it will be necessary to proceed to cut the button-hole. If, as is frequently the case, gathering has been taught on pieces of calico about six inches by three, each long side having been gathered and set into a band, these bands should be utilised as practice for the button-hole. Care must be taken to cut the button-hole perfectly straight I have often seen a scrap of print doubled up by a teacher and cut, producing a slit on single fold, forming two sides of a triangle, and yet a child was expected to work a good button-hole!

When cut, the girls must be cautioned against worrying the button-hole out of shape while working it. When complete, it ought to be a straight slit, the edges just meeting, and feeling as firm as a piece of wire. The length of the button-hole is the diameter of the button, and it ought to be impressed upon the minds of the girls that button and button-hole should match.

Marking (Plate II., page 32) is a stitch easily learnt, and is generally a very popular lesson. The frame again is a simple and effective aid to the teacher. First, teach

the stitch only, the canvas, as before, being the material best suited for the purpose. (Penelope canvas is not advisable, as the threads do not show clearly two each way, which is necessary.) Some teachers find it a great help to teach the letter I first, and then all those letters that have a few stitches in addition to the I, such as E and F, etc. It is also a good plan to make the children copy down a letter in crosses on their slates, learn it off, and bring it next day on paper as a home lesson. True marking, which is not required by the Code, is made by working diagonally, and going over half the stitch twice in some parts, so as to bring the needle out where it is wanted for its next move, thus making the stitch the same on both sides of the material. This is a very neat way of marking, and in some schools the girls like it so much, that they do not care to mark in the ordinary simple cross-stitch.

Another pretty stitch is made by forming a square on the right and a cross on the wrong side of the material (Plate II.). This is called 'queen stitch.' The eyelet-hole marking is also very ornamental, each stitch being worked to the centre. In capital letters four threads each way are sometimes taken for the stitch.

Whether the marking taught forms a perfect stitch on both sides of the material or not, it is important that each letter should be neat on the wrong side, no long threads from one part of the letter to another (commonly called 'fiddle-strings'), no knots, and the thread should be properly finished off at the end of each letter, and not carried across.

I am frequently asked questions something like the following: 'Does not simultaneous teaching cause great waste of time in keeping back the quick girls until the dunces are ready to go on with the next step?' 'How would you manage where Standards IV., V., and VI. are so small in numbers that they are put together in

one class under one teacher ?' These difficulties must present themselves in precisely the same form in other lessons which are taught simultaneously. How does the teacher manage *them?*

I would suggest that the knitting should be set in hand at the beginning of each school year, and kept going all the year, for two reasons. First, because it is then always in the workbags, and ready to be proceeded with at odd moments while waiting for the dunces to be ready, or for the early mark, etc. Secondly, because when taught at one season, and then put away for the rest of the year, the children forget what they had learnt, and at each recurring knitting period have to learn all over again. It also is very desirable to vary the needlework lessons occasionally.

I recently found a large number in Standard III. During that week the teacher was taking marking as the new lesson. Every girl had in her workbag her examination garment and her knitting. The teacher gave to the whole standard a lesson on simple marking stitch. As soon as the quickest girls had learnt this, they were taught the next step, which was to work a row in a simple pattern. Having accomplished this on the little canvas practice sampler, they were allowed to commence the sampler on which they were eventually to work the whole alphabet. They then worked the little pattern in rows of sixteen or twenty threads apart. Before these were completed, however, the dunces were ready to take an advanced lesson with the whole class —say a letter. Thus the whole class learns to mark, though the dunces may only master their six letters, while the quick ones complete the whole alphabet. The dunces will only get through the regulation garment for inspection, while the others finish one each quarter.

In mixed classes of two or more standards, the teacher

would say, 'Standard IV., I am going to give you a lesson on the round end of the button-hole.' 'Standard III., go on with your garments, or herring-boning, or whatever may be in hand.'

A teacher lately was asked to give a lesson on herring-boning to a class of twenty-six just up from Standard II. She worked three stitches on the frame, explaining each step as she went along. She then required the class to show work. Fourteen had done exactly the same as the teacher, seven were correct as far as they had gone, and the rest were quite out of it. She therefore bade the twenty-one go on, and the five dull ones stand up and go over the lesson again. Surely a more simple method of teaching could not be imagined.

CHAPTER IV.

ORNAMENTAL STITCHING.

WE now come to the ornamental stitches. If our pupils have thoroughly mastered the requirements of Stage IV., which took us to the end of the last chapter, they will be able to make any plain undergarment that would be required in the family of a working man.

But as soon as our necessities are supplied, the advance of civilisation and the desire for ornamentation appear to be synonymous. Or is it that our immediate wants of food, clothing, and shelter being satisfied, we have leisure to return to the aboriginal state of our nature, and, like the savage, begin to prick ourselves out in finery? An amusing paper might be written on the following query. When the savage adorns himself

with various paints and tattooings, feathers, sharks' teeth, nose and lip rings, and the scalps of his enemies, is it an advance towards higher civilisation? And when a nineteenth century woman adorns herself with various paints, feathers, birds' and tigers' claws, ear-rings, high heels, and tight lacing, is it an advance towards higher civilization?

Leaving, however, this great question for others to settle, I must own that I think it a pardonable weakness, and one that ought to be encouraged, when a girl, no matter of what station in life, takes pride in having her under-linen well, and, if time permit, prettily made; but I do most emphatically object to attempts at feather-stitching and embroidery, when the essential parts are clumsy, untidy, and insecure.

The art of whipping and setting on of frills has suffered from the ready-made 'everlasting' we can now buy at a cheap rate. Indeed, there are many persons who do not know how to 'whip' at all. The edge of the frill should be rolled on the wrong side, by putting it between the thumb and first finger of the left hand, and rubbing the thumb against the finger, by an upwards and downwards action. The fingers must be particularly clean. The needle is inserted from the back of the roll—*i.e.*, the right side of the frill, towards the worker, and should point in the direction of the left thumb nail. Many mistake 'German-roll hem' for whipping. This is done by putting the needle in from the side nearest the worker, and just under the roll. A Scotch method is to hold the right side of the frill to the worker, and roll the edge away from her, but this seems to me more difficult both to do and to teach. The whip-stitch passes over eight threads, and takes up two obliquely (Plate I., page 17). When whipped, the thread should be carefully drawn up, and each little roll or curl seamed to the band which the frill is to ornament.

The width of the frill is a matter of taste. The length should be about twice that of the band on which it is to be sewed. If the length requires more than one breadth of muslin, the pieces must be joined neatly before either the hemming or whipping is begun.

Coral, or feather, or tree-stitch may be varied and developed just as the worker fancies. One simple pattern is given in Plate I. It is thus worked, using frame and canvas sampler as before. Bring the needle to the front (for greater simplicity in writing, I will call this place X), count two threads to the right of X, put the needle in, and bring it out again at X, taking care the cotton lies under the point of the needle. This makes a neat commencement of the stitch. Then from X count down two threads, put in the needle and take up two threads horizontally, from right to left; put the cotton which comes from the previous stitch under the point of the needle as before. The example on Plate I. will assist in illustrating the stitch, which, whatever may be the pattern, should be neat, compact, and straight, and not, as we too often see it, with straggling threads, some straight, some slanting, 'haphazard all over everywhere.'

Knotting (Plate I.) is another ornamental stitch. This may be made in two or three different ways, but the following will be found the most simple to teach. A very coarse piece of calico, with coarse coloured cotton, is better than the frame when demonstrating to a class. The pupils can learn on their pieces of canvas, or on bits of calico. Having made the end of the cotton safe, bring the needle to the front at the point A (fig. 4), on the right side of the material. Then draw the cotton towards the worker, and round from left to right, crossing close to A, making a loop. Put the left thumb on this loop, to keep it in

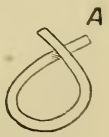


Fig. 4.

place, insert the needle into the garment behind A, and take up say two threads, pass the point of the needle under the loop of cotton, as indicated by the arrow in fig. 5. Draw the needle out straight upwards, put the needle again into the place A, and the knot is complete. The needle comes to the front again wherever the next knot is to be made.

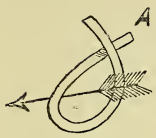


FIG. 5.

Tucks are frequently intended only as ornament, but occasionally are put into children's underclothing, with the object of being let down when the child may have outgrown the length of the garment. Their width and distance from each other are a matter of taste and fashion. A good useful rule to give in teaching, is that the tucks should be their own width from each other. A card should be marked the required distances, and when placed on the garment a strong pin should be pricked through the material at the marks on the card. Then a crease should be made from one pin-hole to the next, which should not be further than about the length of the finger. It is better to fix and work a few inches at a time, as, if the whole length is first fixed, and then worked, the creases will probably be lost, even if tacking threads are used.

The pupils of Standards IV., V., and VI. ought to be taught something of the construction of the various articles of underclothing. If the teacher were occasionally to give a lesson on a garment, and the stitches required to make it, with the names of each part, it would be of the greatest value to the pupils, and would lighten the labours of the teacher.

The object of teaching needlework should be not only to effect the execution of certain stitches, but also to instil an intelligent comprehension of the subject.

To give a pupil an armful of material and say, ' Do

up that seam,' or, 'Put buttons down there,' teaches nothing. One day I asked a girl in Standard V., who was at work on Oxford shirting, what she was doing. 'Please, 'm, I'm doing this.' 'But what is *this?*' 'Please, I'm doing this 'ere.' 'Tell me what you are making.' 'Please, I think it is a shirt.' 'Very well, and what part of the shirt are you now at work upon?' After a long pause, and much puckering of the countenance, 'I think it is for the studs.'

She was, in fact, putting in the shoulder-lining for the sleeve.

What sort of shirts is that girl likely to make in after life?

Garments made for inspection, must of course remain exactly as left by the children who have made them, until after the examination. But nothing can be a more practical lesson for the older girls, than to look over the garments of junior stages, and to put in the finishing touches—*e.g.*, tapes to corners of pinafores, buttons, attend to the beginnings and fastenings off, etc., etc.

When at work on practice pieces, it is very advisable to take a new needleful of different coloured cotton, to ensure correct beginnings; as, for instance, in making a button-hole, or stitching.

I should like to make a suggestion to mistresses of high schools, who may wish to teach needlework to large classes—viz., that they should insist on supplying the material, just as is done in elementary schools. It is impossible to teach large classes, unless all are working on system. It is fatal to allow the girls to bring work from home; the most incongruous garments, utterly unsuited to the capabilities of the girls, will be given to them to be made at school. I have seen a portion of an old barége dress sent, as a piece for a child to learn hemming upon. Some high schools take a small sum each term from every girl in the

school, which is spent in material to be made up by the needlework classes, and given to a hospital or crèche.

CHAPTER V.

KNITTING.

IN the pages on knitting, I do not wish to add one more manual to the many already published, and which in their line cannot be improved upon, containing, as they do, various patterns, and directions for knitting, which an expert knitter can easily develop and adapt to her own requirements. I will endeavour rather to treat the subject as applied to teaching in large schools, confining myself only to plain knitting, and leaving the ornamental stitches alone.

The implements used in knitting are called 'needles,' 'pins,' or 'wires,' in different parts of the country. I call them 'pins' if they have a knob at one end and a point at the other, and 'needles' if pointed at both ends.

The first lesson must be on the correct position of the hands, no matter whether the class consists of infants, aged four or five, or of girls of sixteen years.

Undoubtedly the best mode of holding the needles is that adopted by all the experienced knitters of the North of England, and of Scotland and Wales—viz., that both hands should be over the needles. Some people, from never having been properly taught, hold the right-hand needle exactly the same as a pen, and when once this habit has been acquired, it is, of course, most difficult to overcome. It is impossible, however, to knit so quickly when holding them in this way; and, when knitting a large number of stitches on two needles, the knitter is compelled to hold the right hand over the needles. Therefore, in this, as in all other cases, it is

the simplest and wisest course to teach the correct thing from the beginning. I cannot do better than quote the position of the hands from the little book called 'Needle Drill,' published by Griffith and Farran. (In this little book will be found a very good lesson on teaching knitting by drill.) 'The left-hand knitting-needle should rest on the third finger, midway between the first and second joint, and this finger, with the other two, should close over the needle, the tips resting on the palm of the hand, the end of the needle coming out from under them halfway between the bone of the wrist and the last joint of the little finger. The right-hand needle should rest along the first joint of the second finger, which should be so bent that the tip of the finger holds the needle against the ball of the thumbt The forefinger should press against the needle just below the end, so that the point of the needle is seen just above the finger. The thumb should press against the needle, three-quarters of an inch below the joint; the third and fourth fingers should fall into the palm of the hand at rest.' The cotton or wool should lie over the first finger of the right hand, under the second and third, and over the little finger. The amount of tension thus given by the fingers is sufficient. When put twice round the little finger it is very apt to cause the knitting to be too tight.

I have personal experience of the excellent and rapid results produced by 'drill.' Children aged four and five years were provided with wooden pins, about eight inches long. The teacher also had her pair.

The children were exercised (1) as to right and left hand; (2) taking up and holding the left-hand needle correctly; (3) holding the right-hand needle, working the wrists, and following each action required in knitting a stitch. This class was next taught to 'cast on,' and at the end of five weeks every child could knit plain.

I understate the size of the class considerably if I give thirty as the number. The knitting lesson was half an hour every day, which gives twenty-five half hours for the five weeks. Personal and individual teaching would, at this rate, have given each child twenty-five minutes to itself. Would twenty-five minutes teach a child to hold its needles correctly and to knit? By simultaneous teaching, each child had the benefit of twenty-five half hours.

I think that although the 'casting on' was taught successfully to the class of which I have been writing, it might probably be easier to let the older children 'cast on' and 'knit plain' a few rows, which they would be very proud to do, for those who are ready to knit with cotton, after the drill lesson, as I consider that the casting on is an advance of two steps, instead of one at a time. As soon, however, as the children have accomplished the knitting stitch, I should give them a lesson in casting on. The simplest way to teach this, is by making a slip-knot, or loop of cotton, which is put on to the left needle, and with the right needle knitting a stitch into it; but instead of taking the first loop off the needle, transfer the last-made loop from the right to the left needle. Into this second loop again knit a stitch as before, and pass on to the left needle, until a sufficient number have been cast on.

The next step to be learnt is the chain edge to the strip. This is made either by slipping the first stitch purlwise, or purling the last stitch in each turn. The children must be watched when purling, to be sure that they are doing it correctly, as they frequently put the cotton from left to right, under the point of the needle, instead of from right to left. It is advisable that a whole turn should be purled, and the next knitted plain, which produces a right and wrong side to the knitting, and, if sufficiently well done, serves to learn

darning upon; but irrespective of the darning, the changing of the stitch for ribbing is a difficulty until purling has been mastered. Cotton is the best teaching material for the early stages, as wool splits, and is more expensive. Cox and Co., 101, New Oxford Street, supply a cheap knitting cotton, quite good enough for teaching purposes.

Cotton strips of knitting, joined together, are said to make very good towels, and will sell for the price of

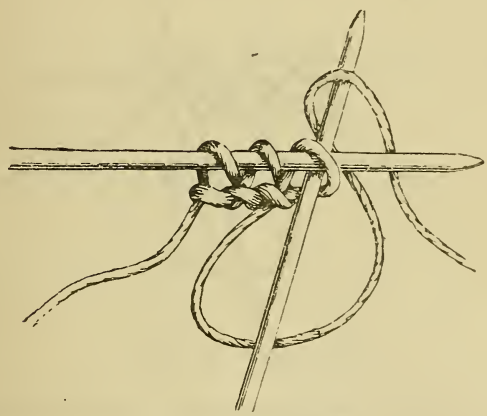


Fig. 6.—Plain Knitting.

the cotton. Short strips, about twelve to eighteen inches long, make excellent little petticoats, as warm as flannel, and wash much better. When the children have learned to purl, many interesting variations and adjustments can be made,—for example, cradle quilts, muffatees, comforters, vests, etc., etc., until we arrive at knitting with four needles. A few simple patterns are given which may be useful.

The illustrations (figs. 6, 7, and 8) will assist in

understanding what is knitting stitch and what is purling.

For plain knitting the cotton is held on the side of the needle furthest from the knitter, passing over the first finger, under the second and third, and over the fourth finger. The right needle goes into the first loop of the stitches on left needle as in fig. 6. The cotton is passed over the point of the needle, and is caught by

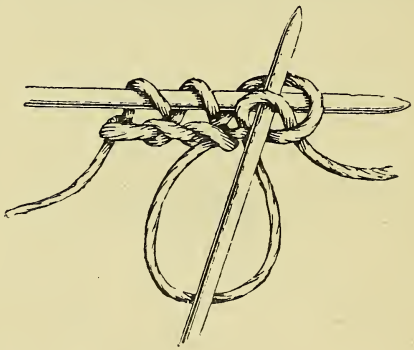


Fig. 7.—Plain Knitting.

it and brought through, as in fig. 7, and the loop is then passed off the left needle.

Purling.—The cotton is brought to the front of the right needle—*i.e.*, to the side nearest the knitter. The right needle is then put into the loop, as in fig. 8, the cotton turned round the point as before, from right to left, and brought through the loop on left needle, which is passed off. If the following stitch is also to be purl, the cotton is in its place; when the succeeding stitch is to be plain, the cotton must be put back to the right side of the needle.

To make holes in knitting for ribbon to pass through.—Bring the cotton forward as in purling, and plain knit two stitches together.

To cast off.—Knit the first stitch, which I will call A, knit the next stitch, which I call B, then pull A over B, which will leave B only on the right needle. Proceed thus till all the stitches are cast off, then pass

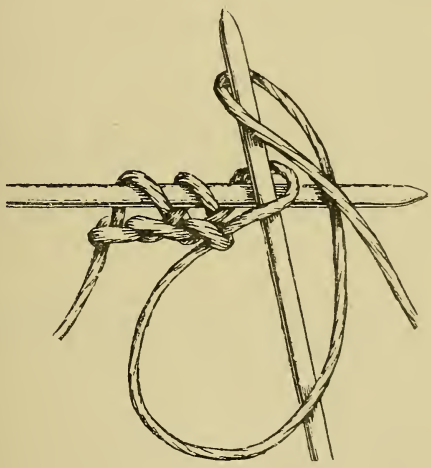


Fig. 8.—Purling.

the end of the cotton through the last stitch. The casting off should be kept loose.

To join ends.—When the old end is about a quarter of a yard long, take the new end, and tie or twist it round the little finger of the left hand, then knit the double wool for about six or eight stitches.

One turn means knitting from the first to the last stitch. One row consists of two turns.

Strip for a Cradle Quilt.—Cast on forty stitches, knit ten rows; then first turn, knit plain ten stitches, purl twenty, knit ten; second turn, knit plain forty. Repeat these two turns until the strip is long enough; finish by knitting ten rows at the end. A fringe can be added. The quilt when completed should not measure less than thirty-six inches long by thirty-two wide, without fringe.

Cradle Quilt in Squares.—First square: cast on forty stitches, and knit plain eighty turns. Second square: cast on forty stitches, purl every other turn. Third square: cast on forty stitches; first turn, knit plain to the end; second turn, purl one, knit the rest plain; third turn, plain; fourth turn, purl two, plain the remainder; fifth turn, plain; sixth turn, purl three, plain the remainder. Repeat thus, purling one extra stitch in every alternative turn, until the eightieth, when they will be all purl.

Comforter.—Cast on any number of stitches divisible by five, say sixty-five. First turn, knit five, purl five, alternately to the end; second turn, repeat. If the last five stitches of first turn were purl, the first five of the second turn must be plain, and *vice versâ*. Continue these turns for five rows, then change the stitches—*i.e.*, if the last five stitches at the end of the turn were purl, the first five of the succeeding turn must also be purl, thus making a chequered or plaited appearance. This may be continued the whole length of the comforter, or the ends only—for about eight inches—may be knitted this pattern, and the intermediate piece, of not less than twenty inches, may be knitted plain. Peacock yarn, with No. 12 needles, will be found very suitable material.

Vests may be made in the following simple manner.

Two children can make one. Each vest consists of the front and back, joined up the sides, and knitted on two needles. When made in scarlet fingering, they will generally sell well. Wooden pins are better to knit these, size No. 8, Bell Gauge. Cast on the requisite number of stitches, knit ten rows; then, first turn, purl one, knit four to the end; second turn, purl four, knit one. Repeat till long enough, and finish with ten rows knitted plain at the end. Or the vest may be knitted in ribs—purl four, plain four—which makes it fit close. A strip of plain knitting, one-and-a-half inches wide, may be added as a shoulder strap if it is wanted.

To judge how many stitches should be cast on.—A child, aged from two to four, measures about twenty inches round the body, and about one inch in addition may be given for every year up to ten years. Knitting will stretch about one-third its width.

Vest of Berlin Wool for Child.—Cast on 100 stitches; two needles; first turn, knit twelve, then purl two, and knit two for seventy-six stitches, knit the last twelve plain. Repeat till the vest is twelve inches long, then knit three rows plain; then one turn, with holes, thus: knit twelve plain, bring wool forward, knit two together, put the wool back, knit four. Repeat till twelve from the end, which knit plain. Finish with three plain rows, and cast off. This makes half the vest. Shoulder strap: cast on twelve stitches, knit plain twenty-two rows, or the twelve plain stitches at the beginning and end of one-half of the vest, can be continued for twenty-two rows, to form the sleeve.

CHAPTER VI.

KNITTING STOCKINGS.

THE difficult parts of a stocking should be taught as separate lessons, and with two needles. It frequently happens that half the girls of a class are ready to turn a heel, while the others are far behind. It saves time to teach the whole class to knit a heel on two needles, with coarse cotton, then those who are ready can go on with their stocking, and the others will know what to do when they come to the same part.

A still better plan is to teach the girls all the difficulties of the stocking before they begin with four needles. For example, cast on twenty-nine stitches, rib, two purl and two plain, for two-and-a-half inches, then purl every alternate turn, and make the seam stitch, as if for the back of a stocking; put in the decreasings; say, four decreasings, with six turns between. Then knit two-and-a-half inches for ankle, continuing the seam stitch, then turn the heel. Let them work such a strip as this twice, and they will be quite at home with the intricacies, and will save themselves and their teachers much time and vexation, caused by frequent unpicking of the stocking. It is a good exercise for the girls to pull the stitches off the needle when knitting a practice strip, and put them on again, as the taking up of stitches is not easy, and is necessary as a practical lesson, not only in cases where mistakes may have been made, but also when knitting a new foot to an old stocking leg, etc., etc.

The making of a toe is also a separate lesson; this must be learnt on four needles. To avoid waste, short lengths or quarter-ounce balls of cotton, or wool, will serve for the separate lessons of heel or toe, which may be ravelled out, and used again. The lesson on knitting

a toe of stocking or sock may be utilised thus: cast on about seventy stitches, with No. 12 needles, and coarse knitting cotton, knit with four needles, rib the first inch, knit plain about six inches, then decrease for toe. This makes a capital glove for children to wash themselves with.

'*Intakes*,' '*Decreasings*,' *or* '*Narrowings*,' are made in two ways: 1st—knit two stitches together; 2nd—slip one stitch, knit the next, and pull the slipped stitch over the knitted one.

When decreasing in a stocking or sock, both methods should be used, as the stitches then fall in pairs. There is generally one plain stitch between the intake and the seam stitch down the back of a stocking. Before the seam stitch, slip and pull over; after the seam, take two together. The two best heels are the Dutch and the Gusset.

The manufacturer's and the French are much alike, but unless in very fine material, the thick ridge made by casting-off is very apt to cause blisters in wearing.

The Dutch Heel is considered the easiest to teach, and the simplest to darn.

If given as an exercise on two needles, it may be made thus: cast on twenty-nine stitches, first turn, knit plain fourteen, purl one, plain to the end. Second turn, purl fourteen, plain one, purl to the end; slip the first stitch in every turn, repeat these turns until there are fourteen slip stitches up the side; then knit plain fourteen, purl one, plain four. Turn, leaving the ten stitches on the left needle untouched; then purl four, plain one, purl four. Turn, plain four, purl one, plain three, slip one, knit the first of the ten, and pull the slip stitch over it. Turn, purl four, plain one, purl three, and purl the fourth and the first of the ten

together. Continue this till the ten are absorbed. There will then be nine stitches on the needle, pick up the fourteen slip stitches down the sides, and the turning of the heel is complete.

The Gusset Heel.—After knitting up the required length for the heel as above—viz., till there are fourteen slip stitches up the sides, proceed as follows: knit fourteen, purl one, knit one. Turn, leaving thirteen stitches untouched, purl one, knit one, purl one. Turn, knit one, purl one, slip one, knit one of the thirteen, and pull the slip stitch over it, knit one more of the thirteen. Turn, purl two, plain one, purl two together, purl one. Turn, plain two, purl one, plain one, slip one, knit one, pull the slip-stitch over, plain one. Turn, and repeat till all of the thirteen stitches on both needles are absorbed, then pick up the slip-stitches at the sides, as in the other heel.

The Toe.—There are various methods of decreasing for the toe. One is to decrease in four places at equal distances, and come to a point. Another, to decrease spirally, by knitting two stitches together in every round, four or five stitches beyond the previous decreasing. But this makes holes, and cannot be recommended. The simplest way, and the most comfortable, when made, is to decrease at the sides, half the number of stitches being on the instep needle, and the remaining half on the two heel needles. At the beginning of the instep needle, slip and pull over; at the end of it, knit two together. At the beginning of the right-heel needle, slip and pull over; at the end of the left-heel needle, take two together. The distance between each decreasing cannot be exactly given, on account of variation of sizes and number of stitches, but as the toe from the first intake is to occupy one-

third the length of the foot, it is easy to see how frequently to decrease. Each intake for toe absorbs four stitches, and the total number of stitches to be cast off varies from sixteen to twenty-eight. The following may serve as a guide. Decrease three times, with as many rounds between each decreasing as there are between each decreasing at calf of the stocking; twice, with half that number of rounds between; twice, with two between, and then every round.

The original scale which I give for knitting stockings has been worked out for me by several expert knitters. It has also been proved by comparison with the scales of sizes used in stocking looms, and is now in use in many large schools. It is the result of much careful inquiry, and the comparison of existing scales; amongst others, those of M. C. G., Cirencester, and Henrietta Warlegh, Colchester.

I do not presume to say it is infallible, but I believe, and hope, it will be found of the greatest help to those who have to superintend the knitting of large numbers of stockings, and who are frequently at a loss for a scale that will produce a well-shaped stocking by an easy method of calculation. Many of the existing scales work in proportion to the number of stitches cast on, but these entail much counting, and still the difficulty remains—How many stitches are to be cast on?

My desire has been to construct a scale that every girl should learn off, and that would be easily remembered. It is, therefore, advisable that every girl in the school should have either a neatly written or printed copy of the scale, for her own use.

Inasmuch as there must ever be persons who are not 'stock size,' it would be impossible to produce a scale, whether for stocking or garment, that would fit everybody. Therefore, when the scale has been thoroughly comprehended, it must be taken as the

foundation, and any slight variations that may be necessary, when 'working to order'—*i.e.*, making for the individual—must be adapted to requirement. For example, the length of the stocking leg is given as twice and two-thirds the length of the foot, but a very tall person will require three times the length of foot. Again, a child may have a large foot, and still be very short, in which case the length of the stocking leg may be twice and one-third the length of the foot. The variation in length must be between the casting on and the first intake; the remaining proportions stand as before. A very stout person may require that eight, or even sixteen should be added to the 'standing number' to be cast on. But still the remaining proportions will work out correctly. Manufacturers' stockings increase the length of the foot by half-an-inch for every size. A child of about four years will take six inches in the length of the foot, and half-an-inch may be allowed for every eighteen months' additional age, up to fourteen or sixteen years; nine-and-a-half inches is the length of a medium size for a woman, ten-and-a-half inches for a man.

The first thing to be done is to determine the length of the foot.

The second, to find out how many stitches are knitted to the inch, with the material and needles with which the stocking is to be made. (This is done in the following manner: cast on some twenty stitches, knit and purl alternate turns for about one-and-a-half inches, then place this piece of knitting flat on the table, and count carefully the number of stitches covered by the inch measure.) Then multiply the number of stitches knitted to the inch by the number of inches in the length of the foot. This I call the *standing number*, and is the number of the stitches to be cast on.

The ribbing is a matter of taste, from one to two

SELF-ADJUSTING SCALE FOR STOCKINGS.*

Number of Stitches Knitted to inch.	Length of Foot.	Number of Stitches to be cast on.	Length from casting on to first Intake.	Number of Intakes.	Length from first to last Intake.	Length of Ankle.	Length of Heel.	Length from Heel to first Intake for Toe.	Length of Toe.
10	$7\frac{1}{2}$ in.	75	10 inches.	9	5 inches.	$2\frac{1}{2}$ inches.	$2\frac{1}{2}$ inches.	5 inches.	$2\frac{1}{2}$ in.
10	$7\frac{1}{2}$ in.	$10\times7\frac{1}{2}=75$	$1\frac{1}{2}$ the foot. $7\frac{1}{2}+2\frac{1}{2}=10$	$75\div8=9$†	$\frac{2}{3}$ the foot. $\frac{2}{3}$ of $7\frac{1}{2}=5$	$\frac{1}{3}$ the foot. $\frac{1}{3}$ of $7\frac{1}{2}=2\frac{1}{2}$	$\frac{1}{3}$ the foot.	$\frac{2}{3}$ the foot.	$\frac{1}{3}$ the foot.

SCALE FOR SOCKS.

Number of Stitches Knitted to inch.	Length of Foot.	Number of Stitches to be cast on.	Length from casting on to first Intake.	Number of Intakes.	Length from first to last Intake.	Length of Ankle.	Length of Heel.	Length from Heel to first Intake for Toe.	Length of Toe.
10		65	3 inches.	5	$2\frac{1}{2}$ inches.	$2\frac{1}{2}$ inches.	$2\frac{1}{2}$ inches.	5 inches.	$2\frac{1}{2}$ in.
	———	$7\frac{1}{2}\times10=75$ $75\div16=5$† $5\times2=10$ $75-10=65$	Invariable Length.	$75\div16=5$	$\frac{1}{3}$ the foot. $\frac{1}{3}$ of $7\frac{1}{2}=2\frac{1}{2}$	$\frac{1}{3}$ the foot.	$\frac{1}{3}$ the foot.	$\frac{2}{3}$ the foot. $\frac{2}{3}$ of $7\frac{1}{2}=5$	$\frac{1}{3}$ the foot.

* Should it be thought that the length given above is unnecessarily long for the heel, the old rule of having as many slip-stitches up the sides of the piece for the heel as there are stitches on each side of the seam, may be substituted.

† Fractions ommited

inches. Length from casting on to first intake, once and one-third the length of the foot.

The number of intakes will be the number cast on, divided by eight, without considering fractions. The length from first to last intake, two-thirds the length of foot. (Therefore the distance between each intake can be measured on an inch tape.)

The ankle begins at the last intake, and must be one-third the length of the foot. The heel is one-third the length of the foot. Length from seam stitch at back of heel to first intake for toe, two-thirds the length of the foot.

The toe must occupy one-third the length of foot. The figures given in the scale on page 55 will serve as an illustration of the above.

Socks may be worked in the same proportions, with slight variation. Length of socks, from casting on to end of heel, should be the length of the foot, and three inches in addition. (These three inches are generally ribbed.)

The number to be cast on will not be so many as for a stocking, as a sock does not cover the largest part of the leg; therefore, the number of intakes must also be reduced.

Find the standing number as above. Divide this by sixteen (without counting fractions). This will give the number of intakes. Deduct twice the number of intakes from the standing number, and that will give the number to be cast on.

The scale will then run as follows:—From casting on to first intake, three inches; from first intake to last, one-third the length of foot. Ankle, one-third the length of foot. Heel, one-third the length of foot. Length from back of heel to first intake for toe, two-thirds the foot. Toe, one-third the foot.

It will thus be seen that the principal measurement

a girl has to keep in her mind is one-third the foot. Should she forget any detail, one moment's thought will enable her to correct herself.

If a teacher provides a large class (Standard III.) with the same materials and size of needles, it will only be necessary that she should find the standing number. Then, for the loose knitters of the class, needles one size smaller must be given. But girls of Standard IV. ought to work out the standing number for themselves, in order to see and understand the principle, for use in after life. Frequently girls are allowed to bring their own material for their stockings, in which case the teacher will find it useful to write on a slip of paper, with the girl's name, the following particulars :—Length of foot, number of stitches cast on, and number of intakes.

To Knit a Stocking.—A slip of card, or paper, the length of the foot, marked in thirds, will be a great assistance as a measure. Cast the requisite number of stitches on to three needles, and join the last stitch to the first, by knitting double with the end of the wool for four stitches.

Rib, two purl and two plain, for one-and-a-half to two inches; then cease ribbing, and knit plain round and round, purling only one stitch, which is called the seam stitch. This purled stitch should be in the middle of one of the three needles. Continue thus, till the length measures from casting on once and one-third the length of the foot. Make the first intake. The number of intakes having been ascertained, by dividing the number cast on by eight, the distance between each intake can be measured on the paper slip. The space the intakes are to occupy is about two-thirds the length of the foot (six or seven rounds are generally sufficient between each).

The ankle begins at the last intake, and must be one-

third the length of foot. This is knitted plain round and round, keeping the seam stitch.

Divide the stitches for the heel, put half the number on to one needle, of which the seam stitch is the centre. This is called the heel needle; there must be an uneven number on this needle, therefore it must rob one stitch from the other half if necessary.

For example, if the stitches number fifty-seven altogether, twenty-nine must be on the heel needle, fourteen on each side the seam stitch, and fourteen on each of the two other needles, which must be called the instep needles.

Then knit the heel, using only two needles, and continuing the seam stitch. Slip the first stitch in each turn. The length must be one-third the foot.

Turn the heel, Dutch or Gusset, picking up the slip stitches on each side, and proceed to knit with four needles again. It will be better now to put all the instep stitches on to one needle and use two needles for the heel stitches. I will call that the right heel needle which is on the right of the knitter when she holds the back of the stocking nearest to herself, and the other will be the left heel needle. The number of stitches on the heel needles must now be reduced, until there are as many as are on the instep needle (*i.e.*, as many on all the needles as were on for the ankle). The stitches being arranged, discontinue the seam stitch. Knit one plain round. Then decrease thus. At the end of the left heel needle, knit the last two stitches together, and at the beginning of the right heel needle, slip the first and pull the second over it. Knit two plain rounds between each decreasing. When the necessary reductions have been made proceed to knit plain, round and round, until the length measures two-thirds the foot, from the seam stitch, at the back of the heel. Make the first intake for the toe, as follows: at

the beginning of the instep needle slip, and pull over; at the end of it knit two together; at the beginning of right heel needle, slip and pull over, and at the end of left heel needle, knit two together. The toe occupies one-third the length of foot; cast off by putting the needles together and knitting the sets of stitches off, or draw the needles out and graft.

My reason for working the intakes of a stocking as given above is that the only thing the girls have to keep in mind is, at the beginning of the needles 'slip and pull over;' at the end, 'knit two together.' This is necessary at the instep gusset, and therefore I carry the same plan all through, though I am aware that many may think it better to work them differently in different places.

A ribbed stocking can be worked on the same scale. It is better to discontinue the ribbing when knitting the heel, but the stitches on the instep needles are generally ribbed until the first intake for toe.

A thickened heel is decidedly most satisfactory when knitted with double wool, or rather when a finer wool is knitted in, along with the original. It may also be made by slipping the alternate stitches on the purl side. It is better to slip the even stitches on the purl side, in one turn, and the odd stitches in the next, as this does not contract the heel so much as when the same stitches are always slipped.

CHAPTER VII.

DARNING.

HAVING learnt how to make most of the necessary articles of underclothing, the next important point is to know how they should be mended. There

is much talk about thrift nowadays, but very little practice of it. A German proverb says, it is easy enough to earn money, but a difficult art to spend it. If it is chiefly the business of the man to make the income, it is generally the lot of the woman to lay it out. A little careful mending will save many shillings, and certain it is that the stitch in time saves the proverbial nine.

The actual stitches required in ordinary mending present no difficulty whatever, but patching and darning are grouped as work for the higher standards, because judgment and consideration are necessary. In patching, the whole difficulty is in the fixing, which requires a little power of manipulation, the stitches used being only those learnt in Standard I.

The correct way to mend can be taught readily enough, with also neatness of work, in patching or darning : but practical mending requires common sense, and whether that can be taught, or whether it is only a gift of nature, which may be cultivated, but cannot be grafted in, is one of those questions which do not wholly belong to a chapter on needlework.

The first principles to be taught in Darning are, 'Do not wait for the hole'; 'Avoid a straight edge'; 'Use material as much like the original as possible'; 'Consider the position of the part, before deciding what sort of darn shall be used.'

It must be remembered that darning is an endeavour to supply that part of the original which has been destroyed, or to strengthen that part of the fabric which shows signs of weakness. In its more elaborate forms of damask darning and stocking-web stitch, it is really hand weaving.

Not only is a great deal of time and trouble saved, but a much more satisfactory result is obtained, if *thin places* are strengthened before they break into holes.

This may be done without having any unsightly work at all.

Straight edges should be avoided, because all the weight of the darn is borne by one single thread of the original, the consequence of which is, that another hole is made just on the edge of the darn. This may be practically shown on the frame, the old-fashioned straight-edged darn with its weight of crossed material breaking away on all sides.

I should have thought it unnecessary to lay down as one of the principles to be taught, that the material used in darning should be as much like the original as possible, had I not seen worsted and cashmere stockings darned with silk and cotton, cotton stockings with sewing cotton, and silk stockings with wool or angola. (One exception may be mentioned, as a liberty to be allowed to the experienced, but not taught to children. Black knitting silk, split, or filoselle, is a more satisfactory material to use in darning fine black lisle-thread stockings than the cotton we are able to buy, because it keeps its colour better. This, however, does not contradict the principle, because as soon as a good black darning cotton can be bought, that will be preferable to silk for cotton stockings.) Darning material should be soft and yielding.

The position of the darn should be considered, in order that suitable work may be used. For example, a yachting Jersey, or the knees of a child's knickerbocker stocking, may be strengthened by Swiss-darning, so as to avoid all appearance of a darn. But to Swiss-darn the heels of fine black lisle-thread stockings is a misapplication of good work, and a complete waste of time and eyesight.

Coarse pieces of stocking-web material, which are sold for the purpose, are excellent for teaching darning upon. Pieces of knitting will also serve, but they must

be well knitted, otherwise the darns will be spoiled if there are mistakes, such as dropped stitches, etc.

Plain darn, and its variations of Twill and Wave, must be darned on the wrong side of the material. It

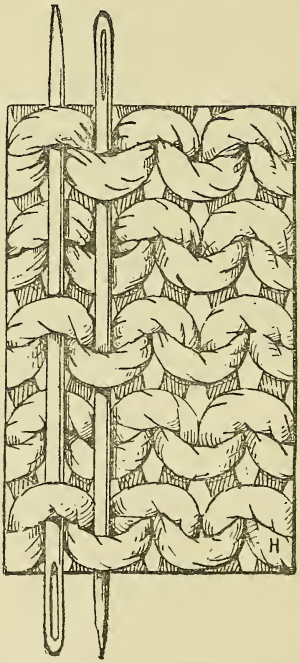


FIG. 9.—DETAILS OF PLAIN DARN.

has sometimes been argued that the darn should be on the right side of the sock, because the 'lumps' hurt the skin. There should be no 'lumps.' The pupils must be made to see that on the wrong side of the web one row of loops goes upwards and the next comes down, for until they have taken this in they will never

succeed in making a pattern, or even a neat darn. It may be illustrated on the blackboard.

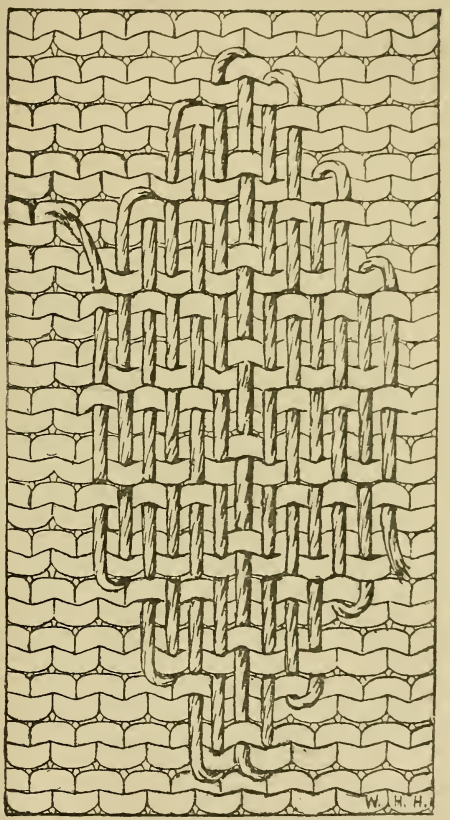


FIG. 10.—PLAIN DARN.

It will be seen from the accompanying illustration (fig. 9), that if the needle is put in at the lower part of the darn it must take those loops that go upwards;

then, when turned to come down, it will be found that the next row of loops are in the same position relative to the needle. Loops of the darning material must be left at both ends; these are afterwards cut and trimmed neatly, and after having been washed once or twice, it

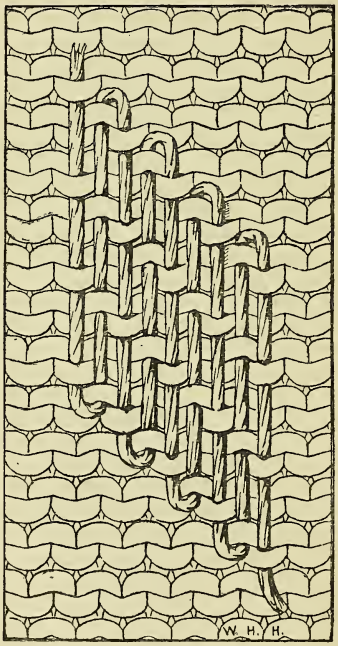


FIG. 11.—TWILL DARN.

will be a difficult matter to p ll out the darning thread, as it will have become part of the original. If no loops are left the darn will shrink and draw up into 'lumps.' To make a plain darn, as in Fig. 10:—

Take one thread and miss one, till there are three

white loops on the needle; draw it out and turn. Be careful in beginning the second row that the correct loop or thread of the web is taken up, as pupils are apt to take two rows above instead of only one. Then take one, miss one, till there are four white loops on the needle. Continue thus, making each row longer at

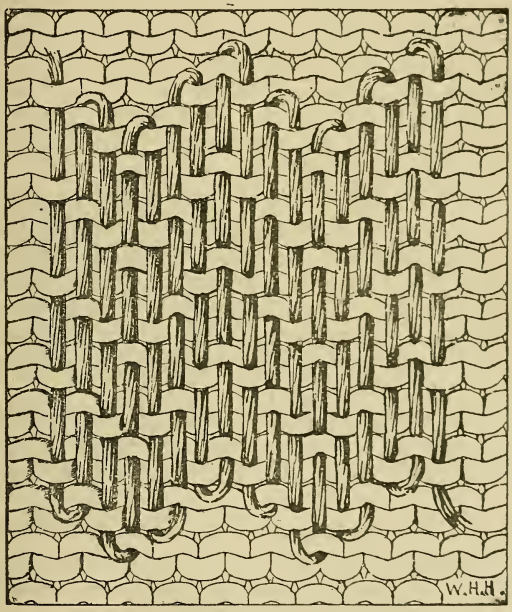


FIG. 12.—WAVE DARN.

both ends, until there are, say, eight loops on the needle; let three rows be made with eight loops, and then decrease one every row till there are three only, as at the commencement.

The Twill darn (fig. 11) is obtained by keeping the same

number of loops on the needle, and therefore, though increasing at one end, decreasing at the other. This is considered a very strong darn. It also shows that a darn may be made on a twill-patterned tweed, or serge material, so as scarcely to be visible.

It will be seen that the Wave darn (fig. 12) is made by taking one loop higher each turn for, say, four rows; then one below each time for the same number of turns. This is one of the best ways of strengthening the toe of a stocking, both on the upper and under part of the foot. The heel may be strengthened in a similar manner, or by the use of the twill, letting the longest thread be down the seam-stitch, and gradually shortening on both sides.

The Bird's-eye darn (fig. 13) may also be used as an interesting pattern, when strengthening thin places. For fine stockings it is less trying to the eyesight, after it has once been learned on coarse material. Coloured wool or darning cotton makes the lesson more interesting, and also enables the teacher to detect the faults at a glance. The following directions will assist in teaching the Bird's-eye pattern.

It can, of course, be made larger by simply missing more threads in the first line, and working out the pattern in accordance with the numbers in the first line.

Begin at the lower end of the darn, and therefore take those loops that go up.

1*st turn.*—Take one, miss four; take one, miss four, till there are five white loops on the needle.

2*nd turn.*—Take one (this will be below the last loop on the previous line), miss three; take two, miss three; take two, miss three; take two, miss three; take one.

3*rd turn.*—Take one, miss two; take one, miss one;

take one, miss two ; take one, miss one ; take one, miss two ; take one, miss one ; take one.

4th turn.—Take one, miss one ; take one, miss two ; take one, miss one ; take one, miss two ; take one, miss one ; take one, miss two ; take one, miss one ; take one.

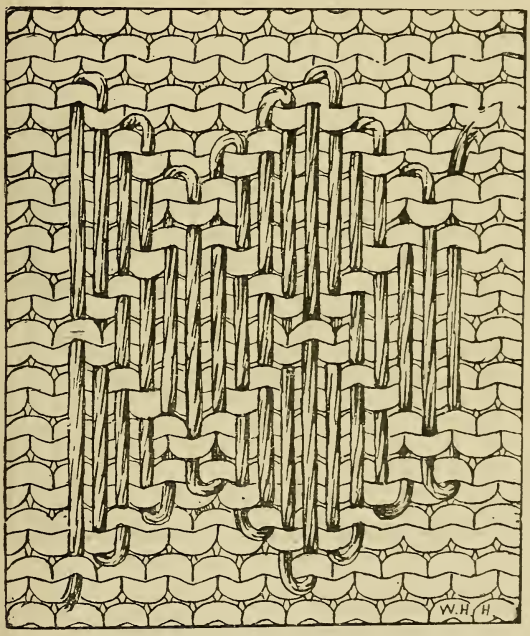


FIG. 13.—BIRD'S-EYE DARN.

5th turn.—Take one, miss three ; take two, miss three ; take two, miss three ; take two, miss three ; take one.

6th turn.—Take one, miss four, to the end.

The sixth row is the same as the first, and the

pattern will show two halves of a diamond. It will be wise to increase one loop at each end, after the sixth row, otherwise the pattern will come to a point. It will be seen that the pattern needs no counting after it has once been understood.

Grafting is joining two pieces of web, or knitting,

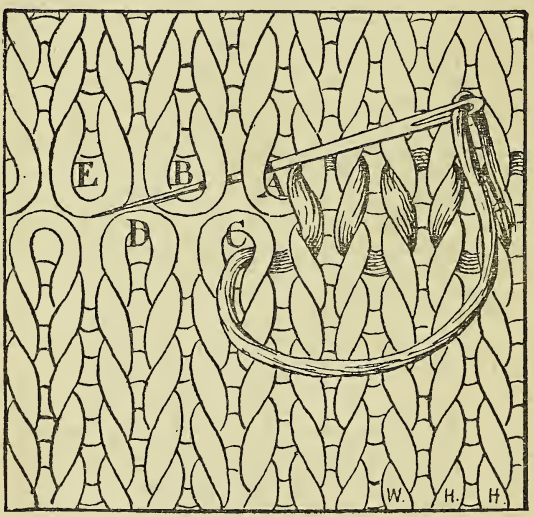


FIG. 14.—DETAILS OF GRAFTING.

together with the needle in such a manner that when the same material is used the join is invisible.

Fig. 14 shows the appearance of the stitch. The loops must be cleared and perfectly even. The pieces to be joined must be placed so that the loops of one are exactly opposite the corresponding indentations of the other. The stitch is worked from right to left, and on the right side of the knitting. The end of the wool having been secured by being darned in on the wrong

side, the needle is brought to the front, and is worked as follows :—Put the needle in at A, and bring it out at B, in the upper row; put it in at C, and bring it out at D, on the lower row; then in at B and out at E, and so on. Each loop has the needle passed through it twice.

Swiss darning is also worked on the right side of the knitting or web, and from right to left. This is a most valuable method of strengthening a thin place, but cannot be used where there is a hole. The appearance of stitch is the fac-simile of knitting, and is in effect the same as the stitch used in grafting, though grafting

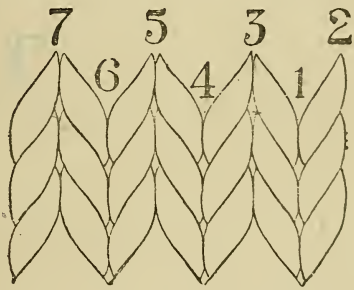


FIG. 15.—SWISS DARNING.

supplies a missing thread, and Swiss darning covers what is already there.

The material used should be a little finer than the original, for if coarse, the darn will be clumsy. If the eye is carried up and down a piece of knitting on the right side, the stitches look something like a series of tiny leaves, which go upwards, as may be seen from fig. 15, and if half the next row is added, the eye instantly sees a row of leaves that go down.

In Swiss darning, the needle goes in and comes out at the point where the leaves meet, which we may call the stem. Let fig. 15 represent a piece of knitting, as

it may be easily drawn on the blackboard; the stems being numbered for the sake of simplification. The end of the wool being darned in on the wrong side, the needle is brought out on the right side at 1, goes in at 2, and comes out at 3. It is then put in again at 1, and comes out at 4; goes in at 3, comes out at 5; goes in at 4, comes out at 6, and so on, as far as may be necessary. Then turning the work round, proceed with the next line in the same manner, being careful not to draw the thread too tight, and to see that it covers the ground without leaving spaces between.

When turning, the needle must be brought to the front wherever it may be wanted for the next stitch. This, of course, depends upon the shape the darn is to be; no rule can be laid down for this; it is a straight stitch, and may be either horizontal or perpendicular, but the eye quickly sees the point where the needle is wanted to appear.

A piece of knitting made of scarlet fleecy or double Berlin, or leviathan wool, knitted with thick wooden pins, stretched on a work frame, or the frame of an old slate, is most helpful in demonstrating darning to a class.

To darn *a hole* as required by Standard V. is not generally understood by teachers, who cut a piece out of some stocking-web material, and expect the girls to fill it in by darning, with results too unfortunate to contemplate. It should be remembered, that a hole in a stocking is generally produced by one thread giving way, and then the friction of wearing causes the loops to drop out of place, but all the material is still there. Therefore, when teaching, imitate as nearly as possible the practical hole. Let the children cut one thread of the stocking-web, stretch it about, and put the thumb into the hole thus made. They will then have a very real hole, but without having cut away any part of the fabric. The next thing to be done is to repair the damage.

On the right side of the material, with an ordinary needle and coloured sewing cotton, draw all the loops close together, being careful not to pucker, and when the hole is thus closed, turn over on the wrong side, and, with darning material, plain darn. A considerable margin should be covered around the hole. It will very rarely be necessary to cross the darn if it is treated in this manner. The sewing cotton should be cut, and afterwards picked out.

To take up a ladder is a very simple matter; it frequently happens that, in knitting, a stitch will drop, and run down, or, in a woven stocking, the same thing may occur, not necessarily from a broken thread, but because the loop has been slipped in the weaving. The loop should be crocheted up, and grafted, or Swiss-darned, in at the top. A small crochet-hook is the best implement to use, though it can be done with a needle or pin. In stocking factories it is a regular trade in itself, women and girls being employed in looking over every article, jerseys, drawers, stockings, etc., taking up the dropped stitches or Swiss-darning places where the wool may have become thin.

In the darning required for calico, or linen, the same principles must be observed as in any other darning, but more neatness is necessary, as the threads are finer. In darning a 'crosscut' the difficulty consists in the fact that the threads are cut cross-wise, whilst a tear goes with the threads. Two triangles are generally used as the shape of the darn of a 'crosscut.' It is a great help to mark out the triangles in pencil. Suppose the line AB, fig. 16, to be the cut; place pencil dots to form a square, and let each dot be the apex of a triangle, the base line of which passes through the apex of the other.

The first triangle is darned with the selvedge, and the second across (it is of no consequence which

triangle is called the first), the double darn, therefore covers the cut. In the three-cornered tear two squares or oblongs are used as the shape of the darn, as shown in fig. 17.

In patching linen, calico, or Holland, the patch should be fixed on the wrong side of the garment. The sewing or seaming must be on the right side, and the felling on the wrong. It is too frequently taught exactly opposite ; this mistake has probably arisen from the difficulty of fixing, but common sense shows that

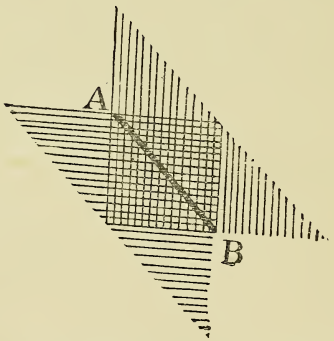


Fig. 16.—Darning a Crosscut.

if seaming, which is the strongest sewing used, is put on the outer edge of the patch, the garment, which is worn somewhat thin, has to bear the strain of the weight of the patch on a thread weakened by the seam, whereas, if the patch is felled on to the garment, the strong sewing is borne by the new patch.

The old-fashioned and very difficult mode of fixing this patch is to turn down the edge of the patch, as for sew-and-fell, to cut out the thin part of the garment by a thread, mitre the corners, and put the patch in by means of the sew-and-fell. Exactly the same results

are obtained if the fixing is done as follows, and the harass of mind caused by 'those horrid corners' entirely avoided:—Turn down the edge of the patch once, then fix it perfectly straight on the wrong side of the garment; let the fixing threads be quite at the edge of the patch, and straight; then turn over to the right side of the garment. The fixing threads will be a guide as to the cutting out of the thin place. Sufficient material must be left between the tacking threads and the cutting to give good turnings-in. Then mitre the corners (*i.e.*, a diagonal snip in each corner); turn the

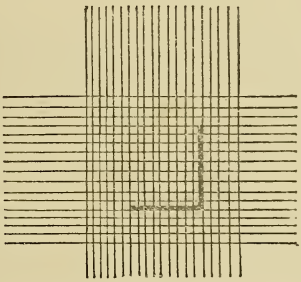


FIG. 17.—DARNING A THREE-CORNERED TEAR.

edge of the garment well under, and tack it. The patch is now so fixed that Standard I. might put in the rest of the stitches. In working for examination it should be remembered that the fixing is the test of the child's knowledge. The seaming, as I said before, must be on the right side, or inner square; the corners will require a few careful stitches, as, of course, they are the most likely to give way.

It is most important that the patch should be put in the same 'way of the stuff' as the garment. Too little attention is given to this point, and hence arise puckered patches, which prove most impractical when the actual

garment has to be mended. When patching flannel the right and wrong side have to be considered, and the way of the nap, as well as the selvedge. A flannel patch requires no turnings-in, but must be carefully and neatly fixed on the wrong side of the garment, and both raw edges are herring-boned down—the edge of the patch on to the garment, and the edge of the garment on to the patch. Print should be matched in pattern. Then, as fashion supersedes thrift, one sewing only is used for print—viz., the seam on the right side of the material. The raw edges are laid out flat on the wrong side, and overcast.

A mull muslin patch should be counter-hemmed, as the material would not bear a sew-and-fell.

The patch in dress material required from Standard VI. should be treated as common-sense suggested. We have three distinct methods of patching—viz., the calico or linen, the flannel, and the print. I should, therefore, adapt or combine such of those methods as I thought best suited to the material. For example, I have seen a serge patch seamed on the right side, and the raw edges herring-boned on the wrong. This made a safe flat patch.

CHAPTER VIII.

CUTTING-OUT.

THERE seems to be an idea in the mind of pupil-teachers generally, that needlework marks do not count for the admission of candidates to the training colleges, though they do count in the final examination for certificates. I have the highest authority for saying this is an utter fallacy, and the sooner it is eradicated, the better for the candidates. Good needlework is an important qualification, and one the pupil teachers

would do well to secure. Handwriting, reading, and needlework, are three subjects which require time and practice to perfect. No amount of 'cram' at short notice can work them up, and marks for them every girl may reasonably hope to secure. Geography and history papers may contain a difficult or unexpected question, which, if unanswered, will entail loss of marks, and which it is almost impossible to be prepared for. Therefore let every girl who hopes to become a teacher pay the greatest attention to her needlework, and look upon it as '*fourth R.*' It is hopeless to make a good needlewoman of a girl of eighteen years who has hitherto neglected that acquirement, and there are so many subjects to be worked up at college, that comparatively little time can or ought to be given there to the *practical* part of needlework. The students should only require to learn some of the higher arts, with methods of teaching, not the actual making of button-holes, or setting-in of patches, as is now the case in too many instances. No teaching can make a girl work well, if she does not practise herself in neat, careful manipulation.

Cutting-out is a very important branch of the needlewoman's art.

To be a good cutter-out requires a knowledge of certain rules, great practice, and an infinite power of contrivance.

To teach cutting-out is one of the most valuable lessons a mistress can give her class, but to put a paper pattern in the middle of material and let the pupil cut all round it, is no lesson, but only work for a baby. One can no more hope to make a first-rate cutter-out of every girl in a school, than to make an artist out of every shoeblack in the brigade. There are, however, certain principles which may be taught, and the eye may be trained to a knowledge of proportion, and many

practical lessons may be given, which will be of the greatest assistance in after life.

The system of teaching cutting-out by the black-board is not particularly new, and has been practised with success for some years both in Germany and England. The chequered boards are, however, somewhat of a novelty, and are a great help. The boards are ruled in lines, one inch apart each way, so as to form squares. Every ninth inch has a different coloured line, to mark the quarter yard. Boards should be ruled in red lines, the ninth being white, or green, as the pattern then shows up more clearly. The pupils are supplied with a sheet of paper ruled in chequer, but in quarter-inch squares, the side of each square therefore being one-fourth the size of the one on the board. The pupils must be made to understand that their paper represents the board, and that they must copy the pattern on to their paper, exactly as the teacher puts it on to the board, but that, of course, it will be a miniature pattern.

In Kinder-Garten schools infants are taught to draw teacups, houses, trains, etc., by chequered board and paper; why then need there be a difficulty to older girls in working out diagrams of garments by the same means? Wherever the method has been tried, it has been successful. It will be seen that, instead of cutting a pattern, the teacher draws it in chalk; the whole class can thus see for themselves, and by following the directions, take down the pattern, using the pencil instead of scissors. One of H.M. Inspectors remarks in his report that 'We have much to learn from Germany, and nothing of more value than the principle of consolidating instruction, instead of allowing it to wander into the grooves of subjects.'

Here, then, we endeavour to make the drawing-lesson assist the needlework. I recently heard of a girl,

Standard VI., who had won a certificate for drawing, and was surprised to find that, when she applied for a situation as nursemaid, and it was discovered that she could not hem a pocket-handkerchief decently, still less cut out any undergarment, she was not in demand. If now she had applied one lesson to the other, she would probably have been a valuable nursemaid and risen high in service, though from the specimen of drawing produced, she would never have excelled as an artist. Again, one of the difficulties in the way of teaching cutting-out to large classes is want of space. Nineteen by twenty-seven inches is, I believe, the desk room allowed in elementary schools, and this difficulty is met by the drawing. As soon as a good diagram of the garment has been drawn, a result which one or two lessons ought to produce, the teacher should show the class how to enlarge from the miniature.

Take the inch tape measure, and dot the inches on the margin of a newspaper, then calling the upper left-hand corner 'A,' proceed to mark out in pencil the pattern given, using the tape to measure the required distances. This may be a home lesson, and is a very good practical exercise, humanising and womanising both homes and girls. The first attempt will probably not be very successful, but if the teacher holds up her own perfect pattern, and compares this with those cut by the girls, they will see their mistakes, and will be able quickly to correct them. The girls learn as much from noticing their own and others' faults, as by seeing the perfect specimen; indeed, the lesson, made perfect by correction, is more likely to be remembered than if, by good luck, the exercise is successful the first time. I shall endeavour to give a few diagrams of simple garments which may be of use in illustrating the system. The 'statement' which will accompany each diagram should be read out to the class line by line, after the

manner of a dictation lesson, the pupils working out each order. The very first attempt might be some simple figure, merely to make the girls understand what is to be done, as in fig. 1 on Plate III., page 80.

Make a dot where two lines meet, and call it K.

Count four to the right from K, make a dot, and call it L.

From K count four down, and make a dot, M.

From L count four down, and make a dot, N.

Join K to L, join K to M, join L to N, and N to M, join K to N, join L to M.

Count from M four down, and two to the right, make a dot, and call it P, join M to P, also N to P.

From K count upwards four, and to the right two, and put O. Join K to O, and L to O.

Lack of accuracy is one of the greatest faults in girls' work; a sort of rough-and-ready anything-will-do policy seems to be the ruling method adopted by them. These drawings require great accuracy, as a quarter of an inch is represented by a very small portion of the square, yet in the garment, one quarter of an inch is all the difference between fit and misfit.

A field of a certain size must first be drawn, from which all the measurements are made. The pupils must understand that the dot is the important mark, the letter is nothing but a name to the dot, and may be placed above or below it, as may be convenient.

Statement of Fig. 2.—A pair of Knickerbocker Drawers.

Draw an oblong 19½ by 14 inches, 14 being the upper line.

Mark the corners A, B, C, D.

From A measure four to the right, and put a dot I.

From A measure 12 down, and put a dot H.

From A measure 2 down and 5 to the right, and put a dot E.

From B measure 3½ down, and put a dot F.
Join I to F by a slanting line.
Join F to E.
Join E to H.
From A measure 2 down, and 2½ to right and dot.
From A measure 4 down, and 1½ to right and dot.
From A measure 6 down, and 1 to right and dot.
From A measure 8 down, and ½ to right and dot.
From H measure 1½ up, and dot.
Join I to H by a curved line passing through the dots.
From H measure ½ an inch down, and one to right and dot.
From H measure 1 down, and 2 to right and dot.
From H measure 2 down, and 3 to right and dot.
From H measure 3 down, and 3½ to right and dot.
From H measure 5 down, and 4 to right and dot.
From C measure 4 to the right and put J.
Join H to J by a curved line passing through the dots.

When enlarging this pattern double the paper or material from B to D, then cut the upper fold, from F to E, H and J, and the under fold from F to I H and J.

This gives one-half of a pair of knickerbocker drawers, for a child of seven to nine years of age.

If opened down the sides, the slit will extend from F to K, and the waistband will be in two parts, each 14 inches long and 2 wide, when made. The legs can be set into a band or insertion 12 inches long.

Statement of Fig. 3.—*A Baby's Flannel.*

Draw an oblong, 5 by 24 inches (24 being the upper line).
Mark the corners A, B, C, D.
From A measure 2½ down, and put a dot E. The same from B.

From A measure $7\frac{1}{2}$ to the right, and put a dot F.

Join F to E on the left.

From B measure $7\frac{1}{2}$ to the left, and put a dot F.

Join F to E on the right.

From C and from D measure 3 towards the centre, and make a dot H.

Join E to H on both sides.

From each F measure 2 towards the centre, and put a dot G.

From each F measure 1 towards the centre, and $1\frac{1}{4}$ down, and put a dot.

From each F measure half-an-inch towards the centre, and 1 down, and put a dot.

From each F measure $1\frac{1}{2}$ towards the centre, and 1 down, and put a dot.

Join F to G on both sides, by a curved line passing through the dots.

The slit X is under the right armhole of the garment, and is for the string to pass through. Tapes about half-a-yard long are placed at the points E to tie round the waist. Shoulder straps of binding, 5 inches long when made, are placed at the points G and F.

Two widths of flannel, 24 inches long, pleated into the waist from H to H, make the skirt of the garment.

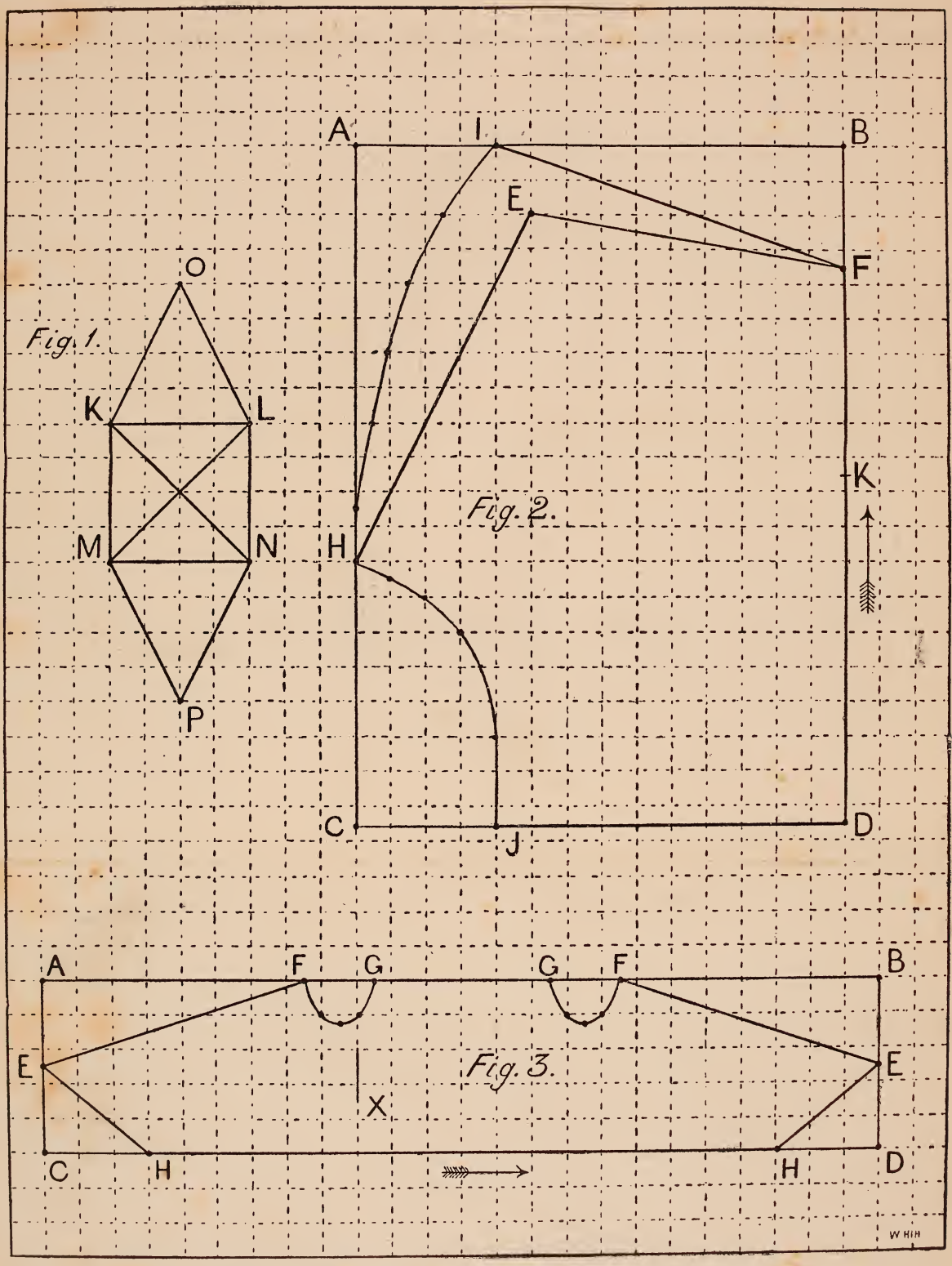
The arrow indicates the way of the warp—*i.e.*, the selvedge.

CHAPTER IX.

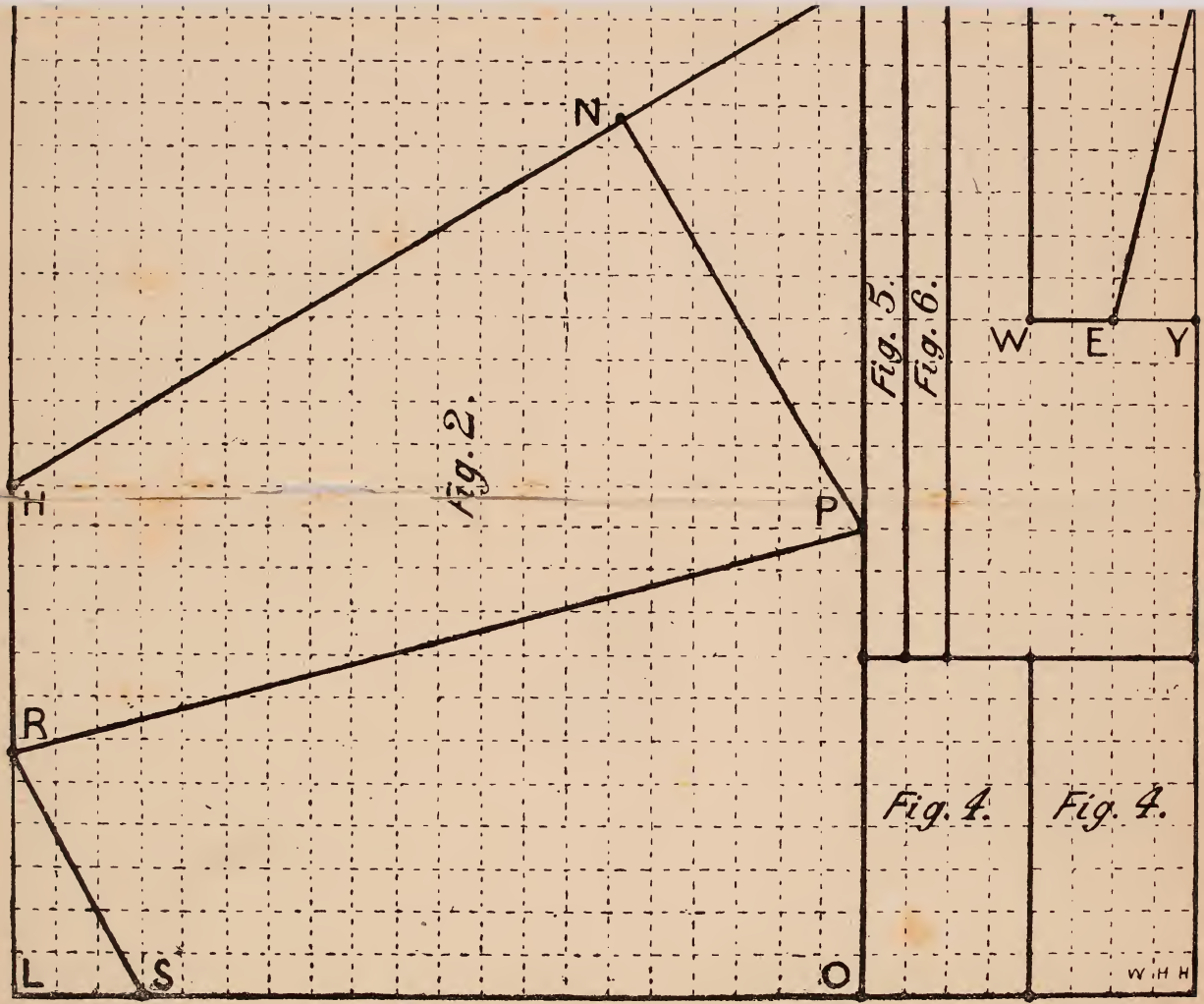
CUTTING-OUT (*continued*).

THE 'way of the stuff' is an 'unknown quantity' to most girls and many teachers, and yet it is one of the utmost importance, both in the wear and fit of garments.

One good general rule is, that the selvedge way (*i.e.*, the warp) should go downwards, from neck to foot of



NOTE.—*The dotted cross lines are supposed to be one inch apart.*



NOTE.—*The dotted lines in above diagram are supposed to be one inch apart. In fig. 2 the way of the cloth is across from L to O. In the others it runs downwards from A to L.*

the garment, except in the case of bands, such as neck-band, waistband, wristband, when the selvedge should go round the garment. Another good general rule is, that the long way of the pattern goes the long way of the material. By these two rules all doubt should be removed from the mind of the cutter-out.

The next important point is contrivance—the planning-out of the pattern on to the material, so as to avoid waste in cutting. Although it is chiefly in the house of a poor man that it is necessary to make the most of a purchase, it is there that we often see the most prodigal waste; and perhaps this may, in some cases, account for the poverty.

I once saw in a school some capital little shirts made out of the gores of calico that were left after cutting out a chemise of a much larger size. The selvedges were seamed together, and were then the centre of the little garment, the sloped sides forming the shape. What could be a more excellent lesson in thrift? The girls could see for themselves, that by a little management a garment could be made out of what would otherwise be thrown aside, the little shirt costing literally nothing but time, and very little of that. They are thus brought to think in what other methods they may lay out a little money to the greatest advantage when making their purchases. This is the more important, since, strange as it seems to people of a higher class, the shopping of the poor is nearly always done by the children.

A teacher has the power of inculcating good thrifty habits by her needlework lessons more than by any amount of the mere accumulation of pennies in a savings bank. Where children don't earn, it is not easy to save.

How rarely do we find a class of girls who have the least idea how much material will be required to make any garment held up to their view, or who know that it

is necessary to consider the width of the material! Calico, for instance, varies from 28 to 40 inches. It would be quite as improvident to buy calico 28 inches wide for a full-sized man's shirt, as to buy 36-inch for a little boy's.

The proportion one part of a garment should bear to another is also apparently a mystery wrapped in the deepest obscurity. The little pattern required in the Old Code from Standard VI., as cut by many girls, was indeed a curiosity—a body which might, or might not, fit a child, with sleeves that could only serve for a doll!

I have with great care worked out the following scale for a shirt, which I trust will be of service as a fundamental scale for plain night-shirts, working-men's day-shirts, and for night-dresses.

The measurements give the *paper pattern* (*i.e.*, what the garment must be when completed), or what the shirtmaker calls the 'block.'

All paper patterns, except Butterick's, are cut the exact size the garment is to be when made, and all turnings required in the material must be allowed for when cutting out from the paper pattern.

A shirt cut out by this scale will be in strict proportion, but if required as a pattern for an individual, it must, of course, be adapted to the size of that individual. In outfitters' houses shirts are made of different sizes to one collar measure. For example, they will have perhaps five or six different patterns for a fourteen-inch collar, in order to fit the tall or short, the stout or thin figure. If the garment is well proportioned, it is sure to fit somebody.

The following is the scale for a working-man's day-shirt, or for a night-shirt :—

Determine the length of the collar-band (*i.e.*, what will meet with comfort round the neck).

The length of the yoke will be once and one-fourth the collar length.

The depth of the yoke one-quarter the collar length.

The yoke slopes to half its width.

The length of the shoulder of the yoke from neck to sleeve half the collar length.

The length of the sleeve, without the wristband, once and a fourth the collar, or the same as the yoke.

Length of wristband, half the collar.

Width of armhole, half the sleeve length.

The shoulder binder should be two inches longer than the armhole; the width of binder one-eighth of the collar.

Total length of day-shirt, from highest point at the neck, two-and-a-quarter collar lengths; the front two inches shorter.

A night-shirt would be two-and-a-half collar-lengths, or twice the yoke.

Width of material, about two-and-a-quarter collar lengths.

Depth of the side opening below the hip gusset is the same as the armhole, measuring from the back breadth.

When cutting the material, one inch, at least, must be added to the collar length for buttoning, also to each wristband. So that if the paper measure of a collar is fourteen inches, the calico must be cut fifteen inches, and whatever may be required for turnings besides,

So also for the wristband; the paper measure would be seven inches, but the material must be eight inches for each wristband, and turnings in addition.

The width of a collar-band is entirely a matter of choice. About one inch when made is usual, though for night-shirts it is sometimes made wide enough to turn down.

The width of a wristband is also a matter of choice.

It may be half its length or less. The collar-band, collar, yoke, and wristband, must be of double material.

Sleeves are not now made with gussets, except in remote country places. The following is a simple method of cutting them. Tear off a breadth of material the required length. Divide the width into three, and put in pins to mark the thirds. Then cut diagonally, from the first pin at the top to the second pin at the bottom, counting from the left side of the calico, as it lies on the table. (In order to cut this evenly it is well to double the calico, to form a crease to guide the scissors.) The diagram (Plate IV., page 81) will assist in explaining this. Then place the selvedge to the crossway, and let it lie flat on the table, and cut off the surplus at the corners on both sides. The crossway of the sleeve goes to the back or under part. The gathers are put in the middle of the wristband. The slope affords play for the elbow, and the gathers at the top of the sleeve are put in at the shoulder. The slit for the wrist-opening ought to be half the length of the wristband, to enable the laundress to iron the wristband when opened out. This is an important detail entirely overlooked by young teachers. The front opening ought to be the same length as the collar.

The hollowing-out of the yoke, at the back of the neck, should be about half-an-inch. The middle of the collar-band should be fastened to the centre of the yoke, and fixed carefully to the point where the yoke joins the front. The rest of the collar-band should then be doubled; this gives the depth for the hollowing out of the front of the neck. This should be cut quite straight down from the yoke, and straight to the front opening. A mistake invariably made by the inexperienced is to cut down to a point from the shoulder to the front of the neck, and that is the reason of so many ill-fitting

shirts. The diagram will give almost a corner. A point, however, should not be made in putting on the collar; this must be rounded, though the main lines must be kept straight. When tearing for the front opening, if it is intended to put a wide hem on to the side that folds over, the slit must not be made in the centre of the breadth, but the side that folds over must rob the other of half the width of the hem. The side that is robbed will require a false hem. In men's garments 'left over right' is the correct fold, in women's the reverse is usual. If a collar is made fast on to a day-shirt, it must not be so long as the collar-band, but should measure only the 'paper' length, and should meet in the middle of the front, when the collar-band is buttoned. The amount of material required for a shirt is seven-and-a-quarter collar lengths.* The shoulder of the front is sloped to match the yoke. The scale applies equally well to night-dresses, the length only requiring to be altered. Three times the yoke, or three-and-three-quarters the collar, will be a good length. Four gores about four inches wide at the bottom, and reaching from the hem to a little below the armhole, should be added to the width. Some people add to the width a straight piece, half the breadth of the calico, instead of gores. This is a matter of choice, and depends upon the size of the garment required.

If it should be wished to make a shirt or night-dress without the yoke, the measurements will be exactly the same, omitting only those given for the yoke. The material may be doubled so as to avoid a join on the shoulder, and shoulder-straps may be added. These will be the same length as the measure from neck to collar—viz., half the collar, and their width one-eighth

* This calculation supposes the width of the material to be two-and-a-quarter collar lengths.

the collar. The neck-gusset will be a square of one-eighth the collar length.

With respect to the diagrams on Plate IV., page 81, it will be well to work out each portion of the garment given on a separate piece of chequered paper, as otherwise confusion, especially with respect to the run of the cloth, may arise, so many parts being there given to save space. In fig. 2 the way of the cloth is across from L to O, but in the others it runs up and down from A to L.

The upper part of half a front is given (fig. 1), just to show the shape of neck and shoulder, but the corner at G should be rounded off.

The sleeve (fig. 2) explains itself. The line from H on the left, to N, is joined to S O, and of course the other half of the material, which in the diagram is occupied by the front, is the second sleeve.

Figs. 4 are the wristbands, figs. 7 the shoulder-binders. Figs. 5 and 6 are the collar-band, and false lining to hem down the front.

Statement of Fig. 1.—*Upper Part of Front.*

Make a field 12 by 18 (18 is the upper line). Selvedge running from A to C.

Mark the corners A, B, C, D.

From B measure 2 down, and put a dot E.

From B measure $7\frac{3}{4}$ to the left, and put a dot F.

Join E to F.

From F measure 2 down, and put a dot G.

From A measure 2 down, and put a dot H.

Join F to G and H, and round the corner at G, instead of as in figure.

The space from E to D is for the armhole.

Fig. 2.—*Sleeve.*

Draw a field 20 by 36 (36 is the upper line). Selvedge running across from L to O.

Mark the corners L, A, O, M.

From L measure one-third of the width—viz., 12 to the right, and put a dot H.

From M measure one-third of the width—viz., 12 to the left, and put a dot H.

Join H to H.

From L measure 3 down, and put a dot S.

From L measure $5\frac{3}{4}$ to the right, and put a dot R.

Join S to R.

From O measure $20\frac{3}{4}$ to the right and $5\frac{3}{4}$ up, and put a dot N.

From O measure 11 to the right, and put a dot P.

Join P to N.

Join R to P.

Fig. 3.—Yoke.

Draw a field 4 by 20 (20 is the upper line). Selvedge running from X to W.

Mark the corners W, X, Y, Z.

From W measure 2 down, and put a dot E.

From X measure 2 down, and put a dot E.

From Y measure $7\frac{3}{4}$ to the right, and put a dot F.

From Z measure $7\frac{3}{4}$ to the right, and put a dot F.

From F measure $2\frac{1}{4}$ towards the centre and $\frac{1}{2}$ up, and put a dot.

Join F to F by a curved line passing through the dot.

Figs. 4, 4 are the wristbands, figs. 5 and 6 the collar-band and lining for front opening, fig. 7 the sleeve binders for the front. Those for the back would be two inches shorter.

For a better arrangement of these patterns see the 3-yard length diagram.

CHAPTER X.

PATTERN-MAKING.

A CAPITAL and interesting test, exercising a girl's power of contrivance, may be arranged in the following manner. Let some sheets of paper, brown or lined, as used in London Board Schools, be pasted together, to represent a piece of calico, print, or holland, say 32 inches wide and 3 yards long. On this let the pupil place paper patterns of garments, so arranged as to get the greatest number of articles out of the quantity of material, attention, of course, being given to warp and weft, and due allowance made for turnings. It is important that the patterns should be of garments that are cut from the same material. For example, at one lesson the three-yard-length may represent calico, and then the patterns must be of garments made in calico. Another time, the length of paper may represent holland, and the patterns should be of garments made of holland.

It will be obvious, that the girls should not be allowed to plan shirts and pinafores at the same time, out of the same length of paper. This exercise may be either a home or a school lesson.

Pupil-teachers in their fourth year are expected to produce 'a roll of sectional paper, $\frac{1}{4}$-inch scale, representing a piece of calico or holland 32 inches wide and 3 yards long, on which patterns of garments suitable for children attending elementary schools are drawn, so arranged as to show the greatest economy of material.'

Here the pupil-teachers are to put on to sectional paper (by way of saving unnecessary waste of material, I presume) the exercise described above.

When the material to be cut out is calico or holland, it is not so necessary to consider the right and wrong side,

and, provided the warp and weft are attended to, the patterns may be placed simply with a view to economy; but when print or flannel is to be cut, then the right and wrong side, and the up and the down, must be carefully noted.

Sometimes the patterns in print are geometrical, then the right side only must be thought of; but if the pattern consists of sprigs of flowers, etc., the material must be so cut that the pattern goes upwards in all the parts of the garment, and every breadth must, of course, be carefully put together, so that the sprigs may not be going up in one breadth and down in the next. Large patterns are very wasteful for children's dresses, or, indeed, for any, as they look very unsightly unless made to match; and the cutter-out has to pay more attention to the pattern than to economy of material.

Flannel has, in addition to a right and wrong side, an up and a down, which may be easily detected by passing the hand along it. The garment should be made with the nap falling downwards; the right side is the most woolly. Some people like to have their flannel garments made with the woolly side inwards, but this is only a peculiarity, and unless so ordered they should always be made with the proper side out.

Under-garments are fortunately not so much affected by change of fashion as outside clothing, but still they do undergo a change. I fancy our grandmothers would much scorn the 'skimpy,' close-fitting garments of the present day, and think them very shabby, when compared with the voluminous be-frilled clothes which they were accustomed to wear.

Formerly it was only necessary to tear off three breadths of flannel, a yard or more in length, to make a full-sized petticoat. Now, however, it must be gored. It is the most economical plan, to slope from the front breadth what may be necessary, rather than to gore in

the ordinary method, by cutting a width aslant, because half the gores thus cut are wrong side out, with the nap falling the wrong way. Therefore, to cut off a sloped piece from both sides of the front breadth causes the least waste. Two-and-a-half breadths are sufficient for the full width at the bottom of the petticoat.

If a deep rounded waistband is wanted, a pattern can be quickly made as follows. Cut out a circle in the centre of a newspaper the size of the waist—*i.e.*, the third of the length round the waist will be the diameter of the circle cut out. Then cut straight from the outside edge of the newspaper to the edge of the circle, so as to allow the newspaper to be placed round the figure, and fold down the surplus, so that the paper lies close to the figure; then cut the band the depth wished for.

The probable quantity of material that will be required for any garment, or series of garments, ought to be carefully calculated before buying, to avoid unnecessary waste. Some people always buy calico by the dozen yards, others by the score. One lady I knew used to buy one single yard whenever she went into the town, because a 'bit of calico was always useful, you know.' Four-and-a-half to five yards will make a nightdress for a person of medium size: a dozen yards of calico would therefore be a most wasteful purchase if intended for these garments.

Seven-eighths of a yard of linen will be sufficient for the ordinary size of English pillow slips, therefore seven yards will make eight slips. The quantity to be purchased should be any number of yards divisible by seven. A whole school staff of pupil teachers failed to tell me how many yards of holland would be required to supply Standard I., consisting of thirty-five girls, with material sufficient for one apron each, a yard long, and containing a width and a half of holland, as their examination gar-

ment, and I am not sure that to this day they quite understand why it is more economical to buy three yards to make two aprons than to buy two yards and have the 'piece over.'

Many persons find a difficulty in knowing how to enlarge or reduce a pattern. The following suggestions may be of use. Let us take, for example, a child's frock. The pattern is good, but the frock is too small every way. How much too small? Let the waist be the line from which all measurements are taken. The skirt, we will say, is fourteen inches long; it is necesary that the new one should be quite two inches longer. Two inches equal one-seventh of fourteen. Increase the whole of the frock one-seventh. For the sake of simplicity, I will suppose the bodice of the frock to be seven inches from the waist to the highest point; it must be increased one-seventh; consequently it will be eight inches deep; but that additional inch must not be put all in one place, but must be divided among the various parts. For instance, the length of seam from waist to armhole must be increased one-seventh; the armhole itself must also be increased one-seventh, and also the little bit of shoulder seam.

The waist measures say 19 or 20 inches round. One-seventh must be added to this, but half the increase must be put in the front of the bodice, and the remainder divided between the two halves of the back. So with a shirt, or similar garment, where there is no waist-line, each separate part,—body, yoke, sleeves, wristband, neck, etc.,—must be increased in their own proportion.

These measurements should all be verified when made before material is cut, because children do not always grow in proportion, and some may only require the increase in length, and not in width.

The following table of sizes will probably be of some

little use as a guide to those who may be cutting out children's under-garments :—

Age.	Waist.	Bust.	Hips.
2 to 4 years	19 inches	20 inches	26 inches
4 ,, 6 ,,	20½ ,,	22½ ,,	28 ,,
6 ,, 8 ,,	21½ ,,	23½ ,,	28 ,,
8 ,, 10 ,,	22½ ,,	25½ ,,	30½ ,,
10 ,, 12 ,,	24½ ,,	28 ,,	32 ,,

It is necessary always to cut from the first pattern, when cutting out a number of garments, by which I mean, when a garment has been cut in material from a paper pattern with the turnings, hems, and tucks all arranged, it is advisable to use this first material pattern, as the one by which to cut all the rest, and it is necessary to be careful that this first is the one used, and not the last cut each time, or else the size of the twelfth garment will be considerably greater than the first.

Do not grudge time spent in fixing.

Be very particular and exact in cutting curves.

When both sides of a pattern are alike, double the material, and cut them together.

Tear everything that can be torn when a straight edge is required.

In holland and linen, a thread must be drawn to cut by.

When a pair of patterns is required, such as dress sleeves, or a pair of backs or fronts of a bodice, the first half having been cut in material, it must be placed with its right side to the right side of the material for the second half, or the two wrong sides may be placed together.

Children should be practised in the use of the scissors ; while waiting at odd moments, let them cut sets of squares, triangles, octagons, etc., out of old exercise-books. They are sometimes so entirely unaccustomed to the handling of scissors that they are most awkward, and jag, hack, or saw, but cannot cut.

Description of Pattern of Pinafore.—Plate V., page 96. Statement of fig. 1.

Draw a field 26 by 23 inches (23 is the upper line).
Mark corners A, B, C, D.
From A measure 2 down, and put a dot K.
From A measure $4\frac{1}{2}$ to the right, and dot E.
From K measure 1 to the right and dot.
From K measure 2 to the right and $\frac{1}{2}$ up, and dot.
From K measure $3\frac{1}{4}$ to the right and 1 up, and dot.
Join K to E by a curved line passing through the dots.
From A measure 7 to the right and $1\frac{1}{2}$ down, and put a dot F.
Join E to F.
From K measure 1 down and 6 to the right, and dot.
From K measure 3 down and 5 to the right, and dot.
From K measure 6 down and $3\frac{1}{2}$ to the right, and dot.
From K measure 8 down and 3 to the right, and put a dot G.
Join F to G by a curved line passing through the dots.
From G measure $3\frac{1}{4}$ to the right and 1 up, and dot.
From G measure 5 to the right and 2 up, and dot.
From G measure $6\frac{1}{2}$ to the right and 3 up, and dot.
From G measure 9 to the right and $5\frac{1}{2}$ up, and put a dot H.
Join H to G by a curved line passing through the dots.
From D measure $9\frac{1}{2}$ up and $\frac{1}{2}$ to the left, and put a dot I.
Join H to I.
From D measure 7 up and 3 to the left, and dot.
From D measure $5\frac{1}{2}$ up and 5 to the left, and dot.
From D measure 4 up and 7 to the left and dot S.
From C measure 6 to the right, and dot.

From C measure 8 to the right, and ½ up, and dot.
From C measure 10 to the right and 1 up, and dot.
From C measure 13 to the right, and 2½ up, and dot.
Join I to C by a curved line passing through the dots.

Statement of Fig 2.—The Collar.

Make a field 6 inches square.
Mark the corners W, X, Y, Z.
From W measure 3½ to the right, and put a dot E.
From W measure 1½ down, and put a dot L.
From W measure 1 to the right and 1½ down, and dot.
From W measure 2 to the right and 1 down, and dot.
Join E to L by a curved line passing through the dots.
From X measure 1½ down, and put a dot F.
Join E to F.
From Z measure 2 to the left, and put a dot M
Join F to M.

Fig. 3 is the Pocket.

The collar is fastened to the pinafore on one shoulder, E, F, and the other shoulder is made to button.

The material is doubled from W to Y, so that only half the collar appears in the diagram.

The arrow indicates the selvedge of each figure. If several pinafores of this pattern are being cut, material must be economised by placing them neck to neck. Then the collars can be cut afterwards; but if one only is wanted, in this case it would be of very little consequence with regard to warp and weft if the collar were cut as placed in the diagram. Half of the pinafore is given, the material being doubled from A to C. The width of Holland would not allow of the whole skirt being cut without a join. The line O O represents the selvedge of the holland. Therefore, the gore R, S, T, must be cut as indicated in fig. 4, and the selvedges seamed together.

CHAPTER XI.

CUTTING-OUT FOR SCHOOL-WORK.

I CANNOT reiterate too forcibly what I said in the first pages, that though certain rules are given for the use of teachers, as to the size and shape of stitches, and the number of threads to be taken up, no teacher must expect children to work by threads on material of which garments are made.

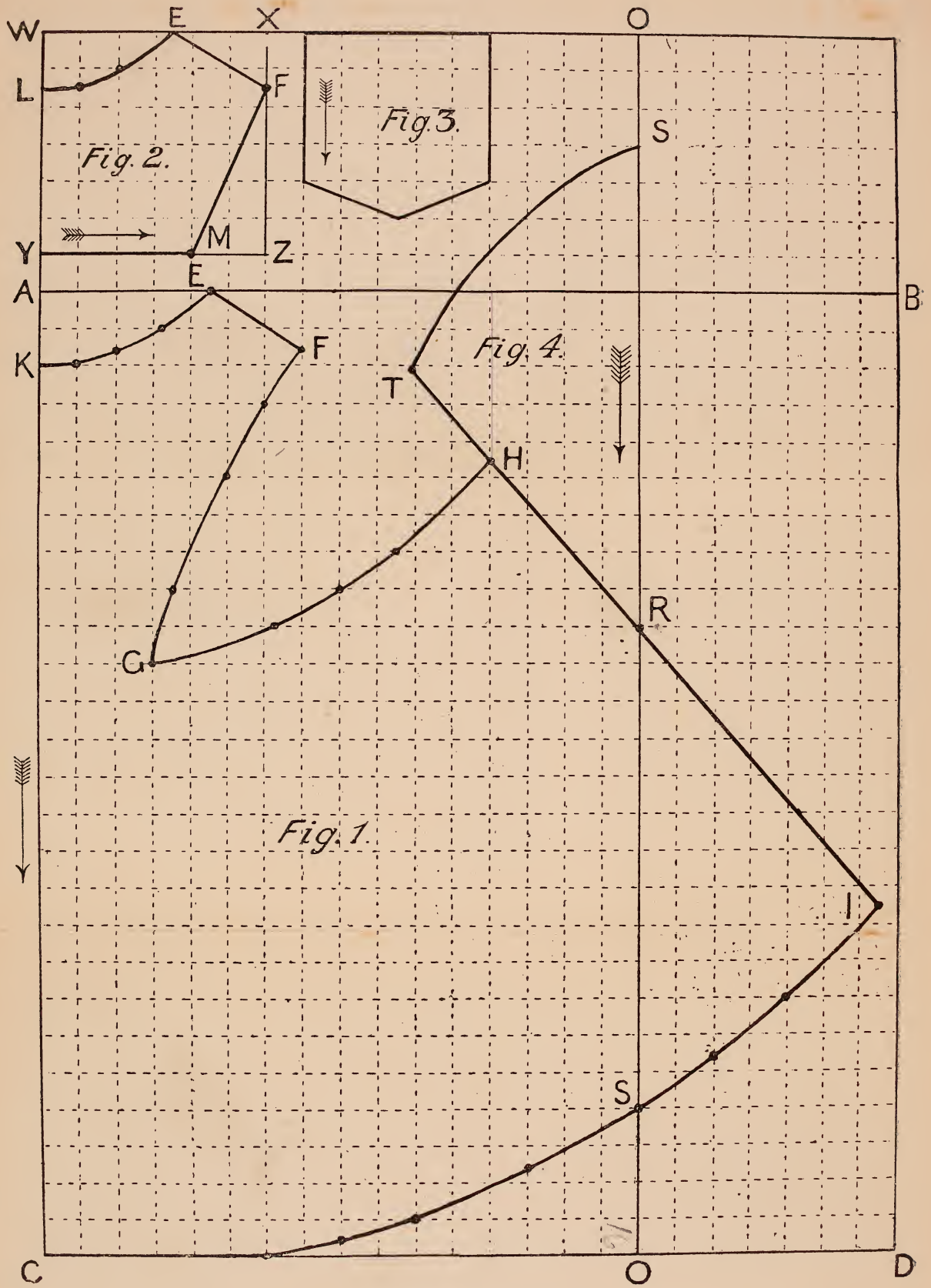
When first learning a stitch, the coarsest of canvas may be used, as it presents no difficulty to the eyesight. Then, if possible, let some proportion be suggested to the children as a guide, when working on material. For instance, in *marking*, the stitch forms a cross, going from corner to corner of a square. In *gathering*, 'Take up half as much as you leave down,' is an order that requires no strain of vision.

The object of teaching needlework is to enable the girls to make and mend for themselves and their families, and I am certain if we turn them out of the schools practical needlewomen, with a good 'household stitch,' we shall have done as much to raise them and their belongings out of the gutter, as any philanthropic movement. Although our workmen get better wages than those of France and Germany, it is well known that in no part of these countries is there to be found the degradation and squalor that there are in England; and why? The ready reply is always, Drink; but we must go further. Drink is the result of wretchedness, as well as the cause. I cannot help thinking that the remark of a member of a School Board, if not strikingly original, is at least the truth. In the broadest Yorkshire dialect he said, 'What we want is better mothers.' I often wish, when I pass miserable homes, displaying from the windows the filthy rags which compose the house linen, that the mothers could use a needle and

thread. The self-respect begotten of tidy clothes will find soap, a fireside, and an account at a penny bank.

At the risk of being ridiculed as a specialist, I would urge upon head mistresses the importance of the needlework subject as a benefit to the community. I would ask them to take it for the 2*s.* grant until it is thoroughly taught in the schools. By-and-by, when the collective system of instruction has become universal, it will be found that there will be time for other subjects to be taken up as well. At present, the children who are being forced into the schools are, except in certain neighbourhoods, of the very lowest class of society, who would have been in the old 'ragged schools' if in any school at all. Therefore it is by slow degrees that we can arrive at high education.

To return to our needlework. We have gone over the ground covered by the requirements of the New Code, Schedule III. We have seen that by teaching children to fix from the first—*i.e.*, in the infant school—they are quite able to fix the simple parts of garments from Standard II. and upwards. I have at this moment on my table a parcel of infants' work—paper slips folded for hemming, and fixed with cotton by infants of five years; pieces of calico, with the hems folded and tacked by infants—boys and girls of six years—from a school which numbers in average attendance 260. By this means the teachers are not obliged to stay after hours fixing and preparing the needlework for the following day. I am surprised that there are still some mistresses who object to teach the children to fix their work. I can only say to them, *Try it*, and I know that when once tried, it will be found a complete success. If I were a mistress I should object to having to stay after hours to fix the work myself. Work heartily in work hours, and when the hours are done, put away work altogether



PATTERN OF PINAFORE.

NOTE.—*The cross lines are supposed to be one inch apart. The arrows show the run of the cloth.*

Now, a word as to the cutting-out of the garments for a school. Government requires only one for each child, but we all know that three times that number can well be accomplished. Still, let us look only at requirements. I have frequently seen garments attempted which are absolutely beyond the powers of the girls, and which the teacher, sick and weary, has to unpick and rearrange nearly every day.

For example, a baby's robe of fine Mull muslin, with thirty or forty tucks of various length, insertion let in, and the whole trimmed with whipped embroidery or lace-edge frill, is a garment that should only be undertaken by a first-rate needle-woman. A girl who could be trusted with such a piece of work must be an exceptionally expert, neat-fingered pupil, whose aptitude for needlework will be to her a living; but such a girl comes only at a rate of about one in two or three thousand, therefore do not put this class of garment out for general school work.

Let us suppose we are planning the work for some 285 girls, the first four standards each containing sixty, the fifth thirty, and the sixth fifteen pupils.

Before the end of the school-year, let all the material for the following year be cut out and prepared.

Standard I. is to make thirty women's aprons of holland or yarn * and thirty infants' shirts.

Standard II., forty-two pillow-cases, and eighteen shirts for children from two to four years.

Standard III., thirty chemises for girls from ten to twelve years, and thirty flannel petticoats for girls of same age.

Standard IV., thirty frocks for children about two years, and thirty shirts for boys from ten to twelve.

Standard V., fifteen pairs of drawers, and fifteen chemises for girls from thirteen to sixteen.

* NOTE.—Yarn is a coarse linen used for servants aprons.

Standard VI., fifteen nightgowns for babies.

Let Standard VI. cut up the forty-five yards of holland or yarn for the aprons of Standard I. The material being placed on a newspaper on the floor, can be measured into yard lengths and snipped by one girl; when she has snipped some three or four yards, three or four girls can each begin to draw a thread and cut off the lengths. Fifteen of these lengths must be again cut into two; a thread must be drawn down the centre of the width, selvedge way (each apron will contain a width and a half of material). The thirty undivided yards must have a piece two inches wide cut off down the selvedge for the bands.

Ten yards of white calico, 28 inches wide, may be cut by girls of Standard III. Thus, one to measure 12 inches, snip, and pass on; the next will tear the piece off, and a third will fold it neatly. These pieces are now ready to be cut by Standards V. or VI. into the pattern required for the baby's shirt (a most simple one is made by folding the width into four, and at the quarters tearing down one-fourth of the length—*i.e.*, 3 inches. On each side of this slit, at a distance of one-fourth—*i.e.*, $1\frac{3}{4}$ inches—tear two more slits, the length of the first—viz., 3 inches. The two narrow pieces form the sleeve).

Standard III. will require 35 yards of calico not less than 36 inches wide (38 would be better), cut by another group of three girls out of Standard III. into lengths $\frac{7}{8}$ of a yard. These are for the pillow-cases.

Nine yards of calico, 36 inches wide, torn into yard-lengths, and each yard again torn down the centre, selvedge way, will make the little shirts.

Standard III. will require $52\frac{1}{2}$ yards of calico, 36 inches wide, to make 30 chemises. The calico must be torn into lengths of $1\frac{3}{4}$ yards. The bands will come out of the gores which are cut off when the garment is shaped.

Thirty yards of flannel, 28 inches, torn into half-yards, will make 30 petticoats. 1½ yards of calico torn into two, and the width of each divided into 15 equal parts, will give 30 strips, selvedge way, for the bands of the petticoats.

Standard IV. Forty yards of print will make 30 frocks for children about 18 months to 2½ years of age.

Sixty pieces, half-a-yard long, must be torn off for the skirts, and 30 pieces, about 8 inches deep, for the bodices. The remainder will make the sleeves. The skirts will have a hem and one or two tucks.

Seventy-two yards of calico, 28 inches, will make 30 plain shirts (for boys about 10 to 12 years, who would take 12 inches as the paper length of the collar-band). This must be torn as follows:—30 pieces, 16 inches long, for sleeves; 30 pieces, 16 inches long, out of which will be cut yoke, etc.* Sixty pieces, 27 inches long, for back and front breadths (both are cut the same length because the yoke gives the increased length at the back).

Standard V. Thirty yards of calico, 36 inches, will make 15 pairs of drawers. This may be torn into 2-yard lengths by the girls. The bands will come out of the pieces left when the pattern is cut.

Thirty yards of calico may be also torn into 2-yard lengths for the chemises, and the bands torn off down the selvedge before the gores are cut.

Standard VI. Twenty-seven yards, 36 inches, will make 15 babies' nightgowns. These should be torn off in lengths of 66 inches. Then after the sleeves have been cut out, the 30 sashes can be torn by the girls, and the 15 pieces, 7 inches long and 1½ wide, for the band in front.

It will thus be seen that out of 285 garments, 162 can be entirely cut by the girls, and of the remaining 123, much is prepared by simply tearing the requisite lengths, and when each girl in the upper standards can

* See description of fig. C of the 3-yard length diagram, page 107.

have her piece of material out of which the garment is to be made, she can pin a paper pattern on to it, and cut it out—as, for example, in the chemises for Standards II., III., and V., and the bodices for the frocks of Standard IV., and so forth.

If a mistress dare not allow the girls to cut from pattern, we have enough garments prepared by tearing to give work to all the school in fixing hems and seams, than which nothing could be a more practical lesson, whilst the teachers are completing the cutting-out in the work hour, and so the whole needlework for the following year may be made ready a month before the inspection, and then the last month may be used in going over the stitches of the different exercises, etc.

As soon as the examination is over, let the new garments be put in hand. Where a mistress has several standards under one teacher, as is frequently the case in small schools, when the garments are thus ready, all the standards can be getting on with those stitches they already know, such as hems and seams, while the mistress, perhaps, gives her first attention to Standard I., and sets it going. I have often grieved over the waste of time at the beginning of a year: three months will be allowed to slip by without one single stitch being put in. Then comes hurry, flurry, and fume. The children having been allowed to forget, are now put under high pressure, and crammed. This is a most disadvantageous state of affairs, and it would be well for us all to remember, 'Sure and steady wins the race.'

CHAPTER XII.

PUPIL TEACHERS' WORK.

THE syllabus of pupil teachers' work is but that of the standards carried out with greater skill, and if a girl is careful to be thoroughly well grounded in this

she will have comparatively little to learn at college, except methods of teaching, construction of garments, etc.

Stocking web stitch is a stitch by which a hole in knitted or woven material may be filled in with a needle to look exactly like the original.

It is advisable to learn first on a card pricked with 8 holes $\frac{1}{8}$ of an inch apart (see fig. 18), and another similar row of 9 holes, about two inches higher. Pass strands of strong sewing cotton from one row to the

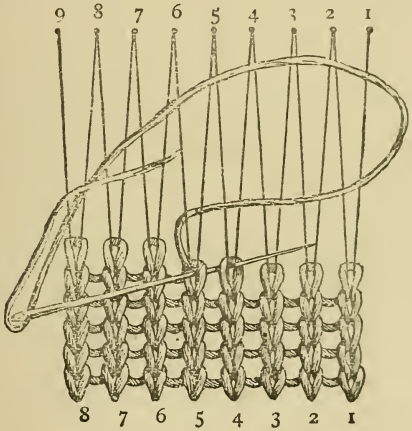


FIG. 18.

other, beginning at the top, and make the cotton go twice through every hole, except the first and last on the top row, where the cotton only goes in once. Then, with a large-eyed needle and knitting cotton, work on these strands a stitch very similar to Swiss darning and grafting (see pages 68, 69).

The diagram will help to illustrate this.

The stitch may be made to represent the right or wrong side of knitting, or both, as in ribbing, purl and plain

(fig. 19). The purl may be learnt by preparing a card as for the plain stitch, and by simply reversing the position of the needle—where it goes under the strands in the plain, it must pass over them in purl; the easiest way to teach oneself is to work a card, in plain stocking-web stitch, and then to cut away the card, and follow the threads on the wrong side.

When making an actual patch, proceed thus :—ravel a hole the size required, carefully unpicking, but not

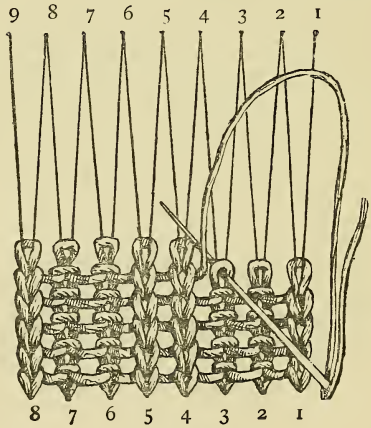


Fig. 19.

cutting away any of the old ends. If mending a real hole not only making a patch for the sake of doing it, enlarge the hole so as to obtain an inch or two of ravelled thread for every row of knitting. When the upper and lower loops are quite clear, and in a straight line, and the sides are also straight, fasten the stocking on to a card to keep the hole even, that there may be no pucker. Preserve the ravelled ends with the greatest care, at the back of the card, or stocking. Then make the strands

of sewing cotton as before, only going from the upper to the lower loops of knitting, instead of pricking holes through the card. With the same cotton, or wool, that the stocking is made of, work the stitch, beginning on the loops of knitting on the right-hand corner of the lower row, and continue to work up the strands, till the upper loops are reached, then graft the last-made row of loops, to those of the stocking which are ready there.

Cut away the fastening threads, which held the card in place. The sides of the patch will still remain to be fastened to the stocking. Now appears the reason for our care of the ravelled ends. Thread a rug needle with one of these ends, and catch a side loop of the newly-made patch, and darn away the end of the ravel about half an inch, in a slanting direction, on the wrong side of the stocking. Thread the next ravelled end, and do the same; for every loop of the patch, there will be found the ravel to join it to the original.

This makes a much flatter, neater join up the sides, than any other method. A patch may be knitted in, instead of worked with a needle. The sides must be treated in precisely the same manner. Sometimes a hole comes in the leg of a knickerbocker, or shooting-stocking, which is well worth the trouble of mending by a patch of this kind. No one would, however, attempt to mend very fine stocking material with such care unless under exceptional circumstances.

CHAPTER XIII.

RECAPITULATION.

THIS little handbook has been written entirely for teachers in elementary schools. It therefore treats only of rudimentary needlework, with especial reference to the requirements of the present Code, and does not attempt to enter upon the higher, and finer, branches

of the subject. A careful reading of the Code will show that nothing more is expected from girls up to Standard VI. than the knowledge necessary to put together the simplest of garments, such as they are sure to require in their own lives.

I object to teaching needlework on fine material. Unbleached calico will fulfil all the *demands* of Schedule III., though good needlewomen, both amongst teachers and girls, would prefer a better material. Patent yarn, which is a coarse linen used for servants' aprons, and coarse stocking-web, will be sufficiently fine for the darning, because when correct methods of the construction, and mending of garments, are understood by the girls, it is easy enough to apply this knowledge to finer material when necessary. But though the material may be coarse, the needlework should be good, the hemming clear and regular, the patches straight, and placed 'the right way of the stuff,' the tapes straight and firm, the buttons secure, and the button-holes not only firmly made, but cut to match the size of the button. Teachers should be careful about the size of the needles and cotton. I have seen what would have been good work spoiled by a thick, clumsy needle and coarse cotton, utterly unsuited to the material of which the garment was made. Cotton No. 60 of Clarke's or Coates' make, is suitable for ordinary white calico, with No. 8 needles (short needles are supposed to lend speed to the needlewoman). No. 40 of the same* make, is quite strong enough for unbleached calico, with No. 7 needles. I have seen linen thread used for unbleached calico, with the idea that great strength was necessary; very coarse, clumsy work was the natural result. It must be remembered that *finish* gives strength, and it is this that is so wanting as yet in girls' work. 'Beginnings and fastenings off' are insecure,

* I merely mention these makers in order to give a definite guide as to the size. Other makers use different numbering.

and yet these are the very points requiring extra attention in the machine-made garment, by which I mean, that when a machine has done all it can, the hand has to make beginnings, and fastenings off, safe and neat, to add buttons, button-holes, etc., etc.

I have often spoken of the influence of a teacher, but I do not know that I ever felt it more strongly, than one day when I visited two schools within a very few yards of each other, as the crow flies, and perhaps five minutes' walk. Both were at the end of their school year, and both had about the same number of infants in average attendance. In the first I found dull, dirty children, with strips of needlework and knitting on the table. 'Where are the garments?' I asked. 'Oh, we have not made any; we are not *required* to make garments in an infant school,' said the teacher. 'I know that; but you would find it make your lesson much more interesting to the children, if you let them make something for themselves. Pocket-handkerchiefs, for instance, or little pinafores, would take no more trouble to fix than those strips.' 'Oh,' replied the teacher, 'I should not know what to do with them when they were made. There is a cupboard full of things the children finished before I came.' 'Would not the parents buy them?' I inquired. 'Oh no, not these children's parents. This is such a bad neighbourhood; they've got no money.' 'Did you ever try to have a little sale?' 'No, it would be no good.' 'Some teachers send the things home by the children, and then the mothers will buy.' 'Oh no, not about here; they are a dreadful set, nothing is any good.' Feeling depressed beyond measure, at the hopelessness of everything, I went to the second school. The same neighbourhood, the same local circumstances, the same 'dreadful set.' There was an array of infants in snow-white pinafores, little faces so clean and bright, little feet placed close together, with an evident desire of attracting attention.

'Will you notice the boots?' whispered the lady visitor to me. 'Hands up, all little boys and girls who have cleaned their own boots this morning.' Up went all the little hands but one. 'Hands up all who let their mothers clean their boots.' Up creeps the one little hand, very much ashamed of itself. 'Do you get this every day, or is it only for my visit?' I asked. 'No, every day. At first the mothers were very angry, when I sent the children back to be washed, but I gave the cleanest child a medal to wear in school time, and soon all came clean. Then about the boots, the mothers said, how could I expect them to find time to clean them. I said I did not, but wished them to let the children try to do it for themselves. Now they take such pride in their children being clean, and often bring them to school to see how nice they look.' 'I see you have made a number of garments.' 'Oh yes, all in the first class have made something.' 'Can you sell them?' 'Oh, they are nearly all bespoken. The mothers would be very angry, if I sold their children's work.'

Cases of this sort I could multiply, but I must not omit to mention the kindly help of the lady visitor, who in this school was most regular in her visits. Once in the week, not always on the same day, she would come in, and quietly taking a chair would listen to whatever might be the lesson of the hour, encouraging both teachers, and children, in any improvement visible, since the previous visit.

CHAPTER XIV.

DESCRIPTION OF THE 3-YARD LENGTH DIAGRAM.

THE sectional diagram at the commencement of the book represents a piece of material 3 yards long, and 1 wide. The patterns are arranged with due regard to turnings.

Fig. A is a baby's nightgown.

If figs. 1 and 2 are placed as on the diagram, the sleeves (fig. 3 A), can be got out of the material, on each side of the skirt.

Figs. 4 A, are the sashes.

Figs. 5 A, the band into which the gathers at the waist are set in.

Fig. 6 A, the false hem down the back.

Fig. 1 B, is a baby's shirt.

Figs. 2 B, are the sleeves.

Fig. C represents a breadth of calico 27 inches wide, on which all the small parts of a shirt are arranged. It will thus be seen that when cutting out a large number of shirts, the widths may be torn off as described on page 99, and then the small parts, out of one width.

Fig. 1 B, is the yoke, and its lining.

Figs. 2 B, the wristbands.

Fig. 3, the collar-band.

Fig. 4 B, the lining to the hem down the front.

Figs. 4 B, are the sleeve-binders, two of which might be 1½ inches shorter, as it would be clumsy to put the binder over the yoke at the back.

Figs. 6 B, and 7 B, are the gussets.

Fig. D is a child's shirt.

Figs. 1 E, and 3 E, are the backs and linings of a calico bodice for a child's petticoat.

Figs. 2, and 4 E, are the fronts of the same. The fronts come close to the selvedge. As they would be seamed together, and require no turnings, the backs are arranged so as to allow of a hem, for buttons, or strings. This is not intended as a model for the exercise required from fourth-year pupil teachers, because the object of that exercise I should suppose to be the testing of their powers of contrivance.

I am aware that I lay myself open to criticism by introducing fig. C—firstly, because the calico used for a baby's garment may be supposed to be finer, and

thinner, than would be used for a boy's shirt, and also, because it is not a complete garment; but I have introduced it, as I wished to show how little waste there need be, if the shirt were cut, after some such plan. Also, I am aware, that the usual material for a baby's shirt, is fine cambric, but I should feel glad if I thought that every poor baby had a shirt of the same calico as its nightgown.

The material left on either side of fig. 2 A, will serve for the crossway linings to the hems, at the neck of the nightgown.

CHAPTER XV.

OUTLINES OF LESSONS

THE following slight sketches of lessons may be of use in suggesting methods of teaching needlework to large classes.

We will begin at the beginning—*i.e.*, with the babies' class, and the threading of needles. We must have a supply of suitable materials. Thick needles, called 'threaders,' with large eyes, and without points, are made for the purpose; they are very cheap, about 4½d. per 100. Cotton, or very fine twine, such as will easily go through the needle's eye, should be cut in lengths of about ¼ yard.

The teacher supplies the class with a threader, and a piece of cotton.

'What have I given you?' asks the teacher.

'Needle and fread,' will be the reply.

Teacher: 'Now I'm going to show you how to thread the needle like soldiers. You must not touch them till I tell you.'

'Take up the needles in your left hand' (the teacher will use her right). 'What do we use a needle for?'

Reply, 'To sew with.'

'Yes. Now look at your needle, and tell me what there is at one end.'

Some will say, 'An eye,' 'A hole,' or 'A point.'

Teacher: 'I want you to hold your needles as I hold mine, the little eye at the top, just showing above my finger and thumb.'

This having been accomplished, 'Needles down' will be the next command.

The cotton will be then held up in the right hand—a little bit, about ½ inch, showing above the finger and thumb to match the needle. Then 'Needles up.'

Now the class has needles in one hand, and cotton in the other, ready for the threading. The drill may be: (1) 'Hold the cotton up'; (2) 'Hold the needle up'; (3) 'Hands together.' 'Now put the cotton through the eye of the needle while I count twenty'; or, the drill may be, 'Cotton up, needles up.' '1, hands apart; 2, hands together. 1, 2, 1, 2, *Three*, thread the needle. Show.'

The next step will be the attempt at making a stitch. The work (*i.e.*, a bit of rag, of any sort, or shape) must be placed over the finger. Thimbles must be given out. 'What do we wear a thimble for?' asks the teacher. 'On which finger are you going to put it?' The needle may be put in without cotton. The drill may be something like this: 'Work, needle.' Repeat once or twice till the class all hold up needle and work as called for. (1) 'Make a little stitch.' (2) 'See if it shines through.' (3) 'Turn it back again.' (4) 'Push it through with the thimble.' (5) 'Draw it out over the shoulder.' Or (1) 'Hold your work up.' (2) 'Hold your needle up.' (3) 'Put your thimble against your needle.' (4) 'Make a nice little stitch (a bit at the bottom and a bit at the top'). (5) 'Push it through with the thimble.' (6) 'Draw it out over the shoulder.'

The teacher will ask what is meant by 'it' in the

different sentences. This lesson will not last longer than ten minutes or a quarter of an hour. Later on, when the little ones understand what to do and cotton is introduced, the lesson may be started by drill, and then allowed to go on a little, while the teacher supervises a few at a time.

When we come to the first class we may teach the beginning of a new needleful. 'Attention! We are going to learn how to begin a new needleful' (cotton of a different colour helps this lesson). 'Break off cotton' (the teacher will demonstrate with her own) 'Show.'

'If you have not got a little end of cotton where it was broken off, you must undo three little stitches, and make the little end come out, just under the hem. Now we will put the new needleful in. We must not have any knots at the end of the cotton. Point the needle away from you, and take up only the little bit at the top of the fold; we do not want it to shine through this time. Now draw the needle out away from you, very gently, till there is a little end, about as long as the old end; now you must tuck both those little ends under the hem, as we don't want to see them again, and put your thumb on the place, till you have made three stitches.'

The drill will not be carried on monotonously for half an hour, but when the children have been accustomed to school-life, they may be trusted to try a little by themselves, while the teacher satisfies herself, that everything is going on correctly. Perhaps the class will be started by drill for five minutes; then, if the children get fidgety, another five minutes in the middle of the lesson, will pull them together again.

When we arrive at Standard III. we generally dispense with drill, and use the frame and board, though many teachers continue to use drill when giving a new lesson. The following may serve as a sketch of a

lesson on herring-boning :—Canvas samplers having been given out, the teacher says, 'To-day we are going to learn a new stitch. This frame is like your samplers, only much larger. You see I have threads that go down, and threads that go across. Look at your samplers, and see if you understand me; also in your pinafores, you will see the threads going down and across, only finer and closer together. This new stitch is called herring-boning. Who can spell it? We will write it on the board. Do you ever have herrings for dinner? Well, the next time notice if you think this stitch is at all like the shape of the bones.' (Demonstrate on the board the likeness.) 'It is used for flannel. If we can keep one piece of flannel on the top of another, until it has been washed a few times, the two pieces will have "felted" together; and flannel is so thick, we cannot double it, as we do calico; so if we can protect the raw edges by a stitch, until it has been washed, we shall not require to make a thick ridge by doubling it under. This is the first stitch you learn which you work from left to right. Now I fasten my cotton (the long coloured wool or cord), and I bring my needle to the front, close to the left-hand side. Now I count down four threads from where the cotton comes out, and to the right four, and put the needle in, and take up two threads, pointing the needle from right to left. I work the stitch on two lines, with four threads between. The next stitch must be taken on the upper line. From where the cotton comes out, count upwards four threads, and to the right four threads; put the needle in, and take up two threads. Now, who can tell me on which line my next stitch is to be made? From where the cotton comes out, how many threads? Up, or down? Do I go in? No, to the right. How many threads? and how many do I take up?' and so on.

As soon as a teacher has shown the new stitch, she should make the class tell her what to do ; then, when all have thoroughly understood the lesson, they will take up their samplers and work it. If the stitch is drawn upon the board, and the attention of the children called to the position of the little crosses (see page 27), it will help them in keeping it straight without counting threads. The next step will be working the stitch on flannel, turning down the edge, and herring-boning it. When this is worked on a square of flannel there is no turning of a corner required, because, first, the top edge will be turned down, and herring-boned from end to end ; next, the bottom edge will be treated in the same manner ; then the sides will be folded over, so that four straight lines of herring-boning are all that is necessary for the square. When a patch is put in flannel, the corners must be made safe and neat.

Young teachers would do well to make their lessons very clear, and concise, and to keep to the point. Sometimes I have heard a teacher—giving a lesson on the above stitch—confuse herself and her class, by telling them what it isn't, rather than what it is. For example. 'This stitch is something like feather-stitching, only different ; and feather-stitching or coral stitch, as it is sometimes called, is an ornamental stitch, worked on calico, on the bands, or round the collar, of a garment. I'll put it on the board, and then you will see where the difference is.' Now herring-boning is taught to Standard III., while feather-stitching is not taught till Standard VII. Consequently a child is much puzzled by the complication of the stitches, and fails to learn its herring-boning altogether.

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